

ST FORMAT

41
COVER
DISK 2

ST FORMAT

Protext v4.3

A fully-integrated word processor including:

- Mail merge
- File conversion
- Pull-down menus
- Dialog boxes
- File selector
- Block dragging

Maastricht

Read the full text of the Treaty on European Union and decide whether Europe is for you!



Win £100! Win £100! Win £100! Win £100!
Load the Maastricht Treaty text into Protext and rewrite it as you wish! Change it in the wildest way you can, then send your amendments to STF, 30 Monmouth St, Bath, Avon BA1 2BW by Thursday 10 December

41
COVER
DISK 1

ST FORMAT

STOS FIX

Persuade STOS to run on any ST or TT

GFA SPEC

Use stunning 512 colour Spectrum pictures in GFA Basic programs

GIF to RAW

Picture file converter

PLUS!

Much much more

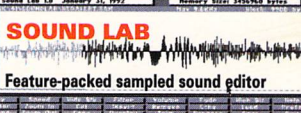
AIR SUPPORT

Play general with a host of high-tech battle weaponry in this demo of the ultimate combat simulator



HYPERBASE

Mix pictures, sound and text to create your own multi-media applications



SOUND LAB

Feature-packed sampled sound editor

NO COVER DISKS?
THEN ASK YOUR NEWSAGENT FOR THEM IMMEDIATELY

ON DISK The brilliant **Protext** word processor
REVIEWED THIS MONTH: Lotus FC, Ween, Shadowworlds, floptical drive, Yamaha synth, high density drive - and more!

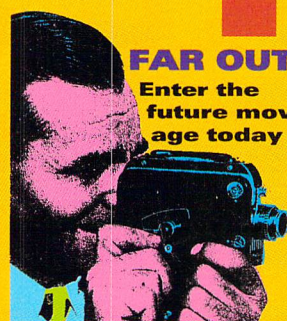
**WHO'S GOT IT
IN FOR THE ST?**
Turn to page 8

**30 PAGE
review
section**

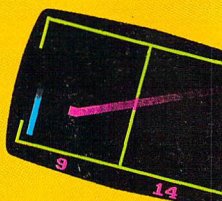
The shape of things to come



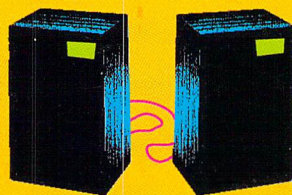
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funkatronic future of
music and melody



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future movie
age today

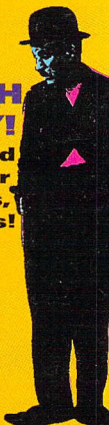


FAB
The ultimate
in games
We reveal all



HEY, DADDIO!
Get with it - get
surround sound!

HIGH FIDELITY!
Sample and
digitise your
fave films,
chums!



IT'S COOKIN'

The fabulous
new multi-media
Falcon (also
available in gr

We investigate
the brave new
world that is
multi-media



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PLUS! Monitors pulled
into pieces and prodded!
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- Save a variety of picture file formats
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- M105-Plus scanning head

Watch out for our regular software updates with many exciting new features, available only to registered users

Power Scanner£99

Ram Expansion

- No soldering required
- Expand to 2MB or 4MB
- Plugs directly inside the ST
- Full fitting instructions
- Uses latest capacity RAM chips

2MB RAM Expansion£99
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 512K RAM STFM£45

New Blitz Turbo

- Back-up your disks at lightning speed
- Copies from the internal to the external drive
- Cleverly by-passes your ST's disk controller chip
- Back-up an ST disk in around 40 seconds
- Now you can switch between your disk drive and Blitz Turbo without disconnecting your Blitz interface

New Blitz Turbo£25
 Original Blitz Turbo£15

Floppy Drives

PC720B



- Award winning drive manufactured by Power Computing
- Super slim design
- Virus blocker (prevents viruses)
- Built-in Blitz Turbo
- Boots from drive B
- High quality
- 12 month warranty

PC720B£65

PC720I

- Atari internal disk drive£39.95

PC7200I

- Official Atari internal disk drive£45
(No case cutting but must be small button version)

PC720P

- Disk drive inc. power supply unit£50

Drive Accessories

Maxell Multi-Colour disks (10)£9.95
 Floppy disks bulk supplied£POA

Boot from Drive B

If you have an internal drive that is not compatible with "Boot from drive B" this cable will solve your problem£9.95

Hard Drives

Series 900 HD

- Super slim design
- Low profile mechanism
- No need for a cooling fan
- Buffered thru'port
- Optional battery backed clock
- High speed 20ms seek rate
- Write protect switch, protect your valuable data
- Power supply
- ICD interface and utility disk

Series 900 40MB£329
 Series 900 100MB£479

Add £10 for clock to be fitted to Series 900 hard disk

Special Offer

When you purchase this hard drive you can buy Lattice C v5 for£60

ICD

The Link™

- External SCSI host adaptor
- Connect Atari ST to external SCSI devices e.g. External HD, floppy drives, Optical drives, CD ROM drives which were originally designed for the Apple Mac, IBM PC, Commodore Amiga, NeXT Atari TT, Falcon
- Atari ST must have a DMA port
- Plug-in and go
- Software included
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- 63 x 76 x 19mm in size
- No power supply needed

The Link™£69.95

Optical Hard Drive



- Manufactured by Power Computing
 - 128MB on one optical disk
 - Read and write optical disk
 - 40ms running speed
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 - SCSI ID switch
- (The link™ must be used to connect drive to Atari computer)

128MB External optical drive£999
 128MB Optical drive & The Link™ £1068
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Lattice C v5.0£89
 Devpac v2.0£29
 HiSoft C£29
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 PC Ditto£29
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 Devpac v3.0£69.95

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and next day delivery

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LC24-200 mono	£239
LC24-200 colour	£289

Citizen Printer

Swift 24e	£279
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(includes colour kit and AMI)

Epson Printers

Laser

EPL 4000

- Ideal first time laser printer
- Print speed of 6ppm
- Print superb quality text and graphics
- Ideal upgrade from dot-matrix

EPL 4000	£639
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EPL 4300

- High quality laser printer
- Print speed of 6ppm
- 1MB memory
- Expand to 6MB
- Adobe postscript option
- 100 sheet tray

EPL 4300	£799
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EPL 8100

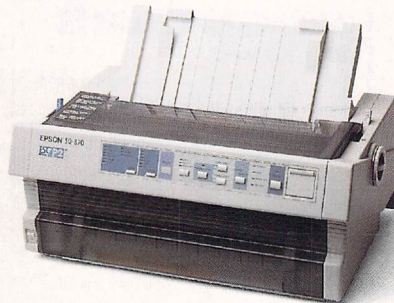


- Prints speed of 10ppm
- 1MB memory expandable to 6MB
- Microsoft printing
- Ritech
- 27 font
- 250 sheet papertray
- Adobe postscript option
- Intelligent/remote emulation switching
- Parallel/serial interface
- Networking capabilities
- Can serve 2-3 users
- Shared printing

EPL 8100	£1349
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Inkjet

SQ870



- New generation inkjet
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- Print scalable fonts
- 660cps print speed
- 360 x 360 DPI print quality
- 128k printer buffer
- Handles four paper types

SQ870	£509
SQ1170	£629

(132 Column printer)

Dot Matrix

LQ570

- Four feed paths
- Flexible paper management
- 225cps print speed
- Easy access control panel
- Memory stores around 4 full pages of text
- Print text and graphics
- Optional sheet feeders
- Optional tractor feeder

LQ570	£289
LQ1070	£449

(132 column printer)

LQ100



- 24-pin
- 250 cps printspeed
- Space saving
- Scalable fonts
- Enhanced graphics
- 50 sheet A4 paper tray
- Dual position design
- Optional tractor feed
- LQ100 fits in anywhere!

LQ100	£209
-------------	------

Dot Matrix Cont.

LX100

- 9 pin
- Tractor feed
- Cut sheet feeder
- Cables
- Some of the LQ100 features

LX100	£189
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Monitor

Philips CM8833 MK2

- With cable
- On-site maintenance

CM8833 MK2	£199
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The Ultimate Cartridge will break into any Atari ST program. Whether you're a programmer, hacker, games player, or just curious about your Atari ST, The Ultimate Cartridge gives you the power that you need. Updates available with new software.

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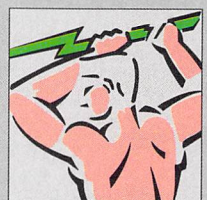
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Win three games! Tell us where the spinline comes from and what the author's real name was. Write to the editorial address above by Friday 11 December.

ST FORMAT ■ ISSUE 41 ■ DECEMBER 1992

Contents

FEATURES

16 VISION ON

We explore video, samples, computer graphics and how you can combine them for the way forward in ST computing.

31 PROTEXT COVER DISK

Quite possibly the best word processor in the ST world. Load it up, then enter the Maastricht competition.

42 THE HARD STUFF

A modest roundup of the very best hard drive utilities.

44 S-S-SA-SAMPLED

What's a sample? How can you make one? Is it painful? And whatever happened to Paul Hardcastle?

46 YOUR FIRST MILLION

Paul Hughes continues his advanced course in DTP. This month: how to start making some cash.

48 RGB GBH

The thinking man's guide to scan rates, tubes and hertz.

71 RANT

Kev Bulmer lets off a kettleful of steam about the world of the ST.

72 BIRDS OF A FEATHER

We bring you actual pictures of upcoming Falcon games!

132 GET STUCK IN!

Just what are all those sockets on the back of your ST for anyway?

134 SPRITES, CAMERA, ACTION

Is there any such thing as a decent film tie-in?

REGULARS

8 NEWS

We exclusively reveal who's got it in for the ST and why. Also exclusive news about Falcon software.

24 COVER DISK

Crammed full of flight sims, sample editors and multi-media programs.

37 FEEDBACK

Scribbling, wibblings and elder siblings all trying to have their say. This month: porridge and origami.

58 SUBSCRIBE!

How to make next year a year to look forward to.

68 MICRODEAL OFFER

Make the most of *Talespin*!

99 NEXT MONTH

Find out what's coming your way in December.

116 EXTRA SPECIAL!

Find out about something rather special that's coming your way soon.

128 SPECIAL OFFERS

Invest in some new hardware or software at these fantastic prices, all with the ST FORMAT seal of approval.

136 EVERYTHING ELSE

Literally.

138 OBJECTS OF DESIRE

The end bit of the magazine resplendent in all its glory.

REVIEWS

79 REVIEWS SECTION

Pages of exhaustive reviews start here. This month: the Falcon, the Link, Migraph OCR, PageStream 2.2, SY-35 synth, Scanlite and a floptical drive. Phew!

80 SCREENPLAY

This month we look at: *Amberstar*, *Lotus 3*, *Shadowlands*, *Magic Worlds*, *Striker*, *Tiny Skweeks* and *Ween*. Good, eh?

100 REDUCED TO CLEAR

Jon Pillar checks out the latest budget games, including: *World Championship Boxing Manager*, *Supercars 2* and *Switchblade 2*.

119 PUBLIC SECTOR

How good are programs from the Public Domain? We review the latest releases - absolutely loads of the things.

102 LYNX ROUNDUP

More funkatronic reviews for Atari's best selling handheld. Including: *Bill and Ted's Excellent Adventure*, *Blue Lightning*, *Hard Drivin'*, *Rampage*, *Robo-Squash* and *Scrapyard Dog*.

HELP!

49 HELP!

Got a problem? Don't worry, sit down and relax. Let us help you.

49 GAMEBUSTERS

Make the most of the cash you

splash out on games by cheating. At least then you don't miss the end sequences.

60 ST ANSWERS

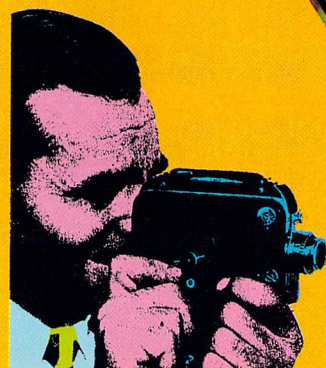
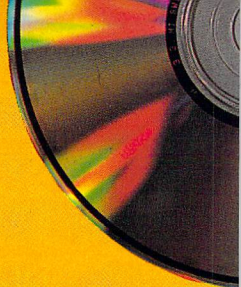
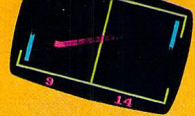
Get your technical problems sorted out by writing to us - here are a selection of your questions answered by the experts.

THE GREAT STF COVER DISKS

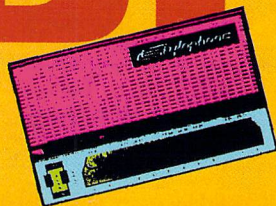


"HE'S SWITCHED OFF HIS TARGETTING COMPUTER..."

But then he had the force on his side and we always find that helps. You'll certainly need a little bit of help from the force if you're going to beat the game *Air Support*, a futuristic flight sim cum strategy game. Red five, I'm going in....



Brave

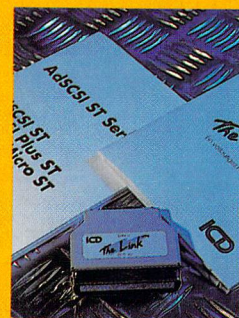


new

Something wonderful is happening in the world of ST computing. We've got the full story on **page 16**



worlds



FANCY DRIVING A LOTUS?
Now's your big chance - **page 80**



MOVIE-MANIA

We look at the seedy world of the film tie-in. Pan over to **page 134**



FIRST AND FOREMOST...

AND THE SECOND'S NOT BAD



Leaping lizard lumps! This is one hell of a good Cover Disk. We've got an exclusive demo of Psygnosis' brilliant new atmospheric game *Air Support*. What with the cover feature investigating the world of multi-media, we've also got a brilliant new program called *Hyperbase* so you can combine text, graphics and sound. Oh yes, and there's also a sample editor, a GFA colour booster - and more!

■ Co-ordinate the efforts of your space fighters or hop into the cockpit and take control yourself in *Air Support*.



Way back in the mists of time when the ST was a new computer, Arnor created a word processor called *Protext*. As the ST has grown and changed, so *Protext* has too. This month we bring you the stunning *Protext 4.3*. This brilliant program enables you to speedily create, modify and format text. It's so good, it's the text processor the *ST FORMAT* review team write with. 'Nuff said?

■ Commit that great novel to silicon with the fab *Protext 4.3*.

TURN TO PAGE 24 NOW!

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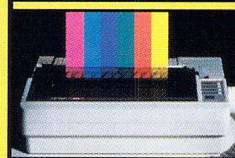
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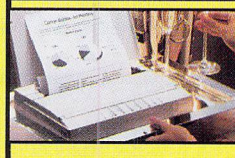
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WHO'S GOT IT

BY
**ANDY LOWE
AND
ROB MEAD**

In recent months, increasing numbers of software companies have decided to stop producing software for the ST. In this special news report, we ask why they're doing this, also what happens next and whether it's all bad news.

We've found out that the ST software scene is being smothered by user specialisation, dealer prejudice and the hard, console-oriented demands of the US market. All the major players in the industry were taking carefully aimed swipes at each other as *ST FORMAT* investigated the much rumoured downturn of the market for ST software.

The publishers

Sensible Soccer – written by Sensible Software and published by Renegade – emerged to be one of the best-selling games of the year. Tom Watson, Renegade's Managing Director has strong views on the ST situation. He explained: "A lot of ST owners establish their software libraries in the first few months. Once they've got their first 10 or 20 favourite games, they then become more selective about what they buy."

"The ST market was selective from the beginning anyway, but

then the hardware stopped selling in great numbers and so the few areas of activity have fallen away.

"Basically it's a mature market, which is a curious thing for the software industry. ST owners want really good games which execute well on their machine. They just won't take a crap knock-over from the Amiga. On the ST, you can't get away with what you can get

"The market is there and people who say it's gone are talking out of their arses."

**Tom Watson,
Renegade MD**

away with on the Amiga – which is a very young market.

"Our industry's a fairly simple one and it can't cope with ideas like mature markets, because of the way in which certain products reach the shops. We want to support the ST, but it's becoming more difficult because of the way wholesale distribution restricts the market. Distributors see ST sales as less significant than Amiga sales. About 18 months ago, the ST was seen to be suffering and the industry treats this concept simply – either it's alive or dead; it can't possibly be in between. In terms of market dynamics, things

are a lot more subtle. With *Sensible Soccer*, the Amiga version is outselling the ST by 5:1. Around a year ago, with *Gods* and *Magic Pockets*, the ratio was only 2:1.

"It's just ridiculous when we have our phones ringing with ST owners who go into their local retailers and can't get hold of ST games. A lot of them are also told that the game won't be coming out on ST – even if this isn't true, which is a bit disturbing. Somewhere, the wholesaler and retailer buying teams have got it into their heads that the game isn't going to happen, and it's much more than misinformation.

"It's believed that the better games won't be coming out on the ST... if it's good, then how can it come out on the ST? That attitude is definitely there at retail level. The ST market demands and so everyone assumes that it's a dead market. The people who are choking it are those who take ill-informed, knee-jerk decisions – the people who have the ability to con-

strict the supply to



■ Tom Watson, Managing Director of Renegade and responsible for the likes of *Gods*, *Magic Pockets* and *Sensible Soccer*. He may look like a friendly,

unassuming chap, but he holds some extremely strong views on the state of the ST software scene.

the market. We have to consider, by mid-'93, whether or not there will be a method of supplying the ST market. The market is there and the people who say it's gone are talking out of their arses. We've hit well over five figures on *Sensible Soccer*.

"Consoles are inherently more unstable than computers. If there were more people in the industry who understood how to publish, then we wouldn't be in the situation of people not being able to buy the best-selling game of the year in the shops!"

Monkey Island 2 – Le Chuck's Revenge was one of the more infamous games not to make it onto your ST. US Gold were the people who brought you the original – widely recognised as one of the finest games ever.

Danielle Woodyatt, US Gold Public Relations Manager: "Firstly, it's virtually impossible to convert *Monkey Island 2*. You'd need a higher spec machine. US Gold are supporting the ST in Britain, with games like *Legends Of Valour* and *Streetfighter 2*, and we'll continue to do so as long as there's a strong user base. In America, the ST is seriously declining, with the consoles and PCs leading the market. Also, if a game's sales are unlikely to match the production and development costs – huge for a game like *Monkey Island 2* – then the conversion just isn't going to be viable."

The distributors

A lot of the blame for the lack of available software has been placed at the feet of Leisuresoft and Centresoft, the two major UK software

ALL BAD NEWS?

We reported in *STF 38* that Delphine Software, the French programmers responsible for *Another World* and *Future Wars*, were not planning to convert their latest game, *Flashback*, onto the ST. They have now, partly thanks to canvassing by *ST FORMAT*, changed their minds, and the game will be available on the ST very soon.

Marie Considienne, US Gold's French Product Manager enlightened us: "The French ST market hasn't declined as

quickly as the UK market.

There's a much stronger demand for ST games in France and Delphine are obviously keen to satisfy the demands of their own market place. That said, we haven't actually had a firm delivery date on the ST version yet.

"The main point is that different formats are stronger in different markets at different times. The US market leads the trend and the European market follows on from this. As an example, the Commodore 64 has

been a popular format in the UK for many years, but it's been virtually non-existent in France. At the same time, the Amstrad CPC was popular in France, but it didn't do anything in the UK. It's strange. The selection of formats on which to develop software has to be seen on an international scale."

The gloomy side is also offset by the good news of the serious software packages soon to be released on the ST. A new version of Compo Software's word

processor, *That's Write* is being developed which is compatible with PostScript files. The DTP package, *Calamus SL* from Halco is also being expanded, enabling you to add on extra modules and use imported digitised pictures. On the music side, Sound Technology's *Notator Logic* sequencer is being updated for greater ease of use, with an object-oriented user interface which enables you to patch in MIDI instruments without having to type in any text.

IN FOR THE ST?



■ **Ash Taylor, Leisuresoft boss - one of the people responsible for ensuring ST software gets into the shops.**



■ **Richard Steele of Centresoft. They claim the software market has polarised between consoles and PCs.**

distributors. *ST FORMAT* gave them the opportunity to defend themselves.

A Centresoft spokesperson told us that their purchasing decisions were only based on the demands of the market and that the ST suffers because, unlike the Amiga or PC, it isn't modular and so sells badly anyway. Surprisingly, we were also told that Amiga sales are beginning to drop away as the market becomes more polarised between the high-performing consoles and PCs.

At Leisuresoft, Stephen Mold, the Software Purchasing Manager,

claimed that STs are in a serious decline. He portrayed people with STs as more discerning, pointing out that *Sensible Soccer* did well on ST, but only represented 4:1 of overall sales in comparison to the Amiga version.

Not even the programmers escape a portion of the blame. Stephen sees the programmers earning more money writing console games and, if they're going to convert the software onto the ST, they would expect a similar fee, which simply isn't viable.

The retailers

Many *ST FORMAT* readers have complained that ST software is getting more difficult to find in the shops. As a result, mail order companies like Special Reserve have been one of the havens for software-hungry ST owners. If the demand is there, why aren't the major high street stores stocking the goods?

At WH Smith's, Amiga games outsell their ST counterparts by 5:1. The only ST game in the top 50 is *Sensible Soccer* at number 18 - every other title is Amiga. It's also a depressing fact that one of the biggest newsagents in the country is selling more Commodore 64 games than ST games, with only the Spectrum faring worse. As a result, Julian Neal, at WH Smith's

Head Office in Swindon, told *ST FORMAT*: "ST sales are very weak and, at the end of the day, it's just a case of supply and demand. In the New Year, we are going to cut back even more."

Even at Special Reserve, ST software now represents only 13% of sales - a figure which, this time last year, was 33%.

Rubysoft's Cliff Clark blamed the publishers for not providing the software and admitted that he's no longer recommending the ST to customers. He pointed out that, in the past two weeks, he has been offered only three new ST game releases when compared with ten for the Amiga and, after Christmas, Rubysoft's shops will not be stocking STs.

STs becoming more specialised?

But according to Mike Alderton, General Manager of Cambridge Business Software, the ST still has plenty of life in it. His company still enjoys a high turnover of ST products and estimates a sales potential of around £1,000 to £1,500 per day, with annual sales of Atari products reaching the £200,000 to £300,000 mark. He lays the apparent blame for the ST's demise on the distributors, explaining that for every hard drive sold, CBS lose one sale because they don't have the stock. Mike sees the ST abandoning its waning games potential and moving further towards becoming a specialised machine, particularly in the fields of music and DTP.

IS ANYBODY OUT THERE?

If you're unhappy about the attitude of anyone or any company in the ST industry to ST software and would like to voice your opinions, then contact the companies listed below to either protest or register your support. Things aren't going to improve until you can emphasise your presence and enthusiasm to the people who have the power to influence the direction of the ST software scene...

Telephone numbers

Renegade ☎ 071 481 9214
US Gold ☎ 021 625 3366
Leisuresoft ☎ 0604 768711
Centresoft ☎ 021 625 3399
WH Smith's Head Office ☎ 0793 616161
Special Reserve (Mail Order) ☎ 0279 600770
Rubysoft ☎ 071 381 8998
Cambridge Business Software ☎ 0763 262582

FISHY, VERY FISHY...

Be warned. Cod knows, those fishy puns are going to be skating around with monotonous regularity over the next month or so. Yes, you'd better believe it - Pond is

back, only this time he's not fighting off any evil piscine enemy agents... He's decided it's time to relax and has gone on holiday.

The Aquatic Games - starring James Pond and the Aquabats are going to be doing the back-stroke in the deep end of your ST sometime in November. It chronicles the exploits of Pond and his pals as they do a spot of rather marine-oriented limber-

ing up in preparation for their next adventure - a terrifying confrontation with the dread-inducing Dr

Maybe. Who writes this stuff? It's a slightly irreverent sports sim featuring the cute one and the Aquabats competing in such mind bendingly silly events as the 100 Metre Splash, the Hop-Skip-Jump and the Leap Frog. This probably includes a bit of joystick waggling and an ample number of puns to carp on about.

There are eight events in all, plus bonus events, four new characters, practice or championship mode, three skill levels and a four-player option, enabling you to get together with three chums and have a good argument about what kind of a fish James actually is. It'll cost you the customary £25.99 and we'll do our utmost to review it next month. Fin.



■ **The shell-shooting event. Pond has been stung. By a jellyfish, perhaps? Quite remarkable. Oh, and relax girls, he's married.**



■ **Mr Pond is famous for his eagerness to get out there and meet his public. Here, our very own production assistant but soon-to-be-new-games-writer Rob "Cuddles" Mead, tries very hard to pretend that he is posing with James Pond and not a Millennium PR assistant dressed up in a silly outfit.**

EDUCATION WAS NEVER THIS MUCH FUN

Noddy's Playtime is a graded creativity and entertainment package for home computers based on solid educational principles for 3-7 year olds.

Drive with Noddy in his car and explore the magic of Toytown, visiting the 8 special learning locations.

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- N&B Works - observation game
- Chimney House - musical fun
- Noahs Ark - jigsaw puzzle
- Farm Yard - animal matching
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- Post Office - counting
- Police Station - maze game

Also included is a junior Art Package which develops your child's creative ability.

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Noddy's Playtime features user friendly icons so that even the youngest family member can learn and have fun.

There is a choice of 3 carefully defined learning levels designed in consultation with teachers. Noddy's Playtime also includes FREE: Toytown map, keyboard overlay and wobbler.

A comprehensive manual and parent teacher guide will enable you to bring your child's imagination to life.

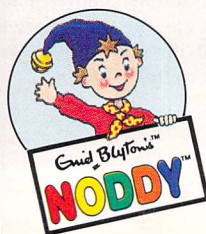
ST Format

ST 520 and above, (FM/E compatible), colour monitor or TV required (D/S).

Available from the end of November at major stockists.



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IBM PC screen shots



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FALCON040

BOOSTS NEW ATARI FAMILY



BY
ANDY HUTCHINSON

Atari have been developing a 68040 based Falcon computer. It will almost certainly be released in the third quarter of 1993 in a brand new PC-looking case and is likely to cost around £1,000. It is to be entirely compatible with existing Falcon software and will achieve the seemingly impossible feat of improving on Falcon's superior processing power.

The machine, named Falcon040, was developed alongside Falcon030. Atari always intended to release the machine a year after they launched the original Falcon as a direct broadside at the business market. With all the usual Falcon features such as the DSP chip inside the case, but running off a 32MHz 32-bit chip, the machine will be absolutely perfect for heavy duty graphics, music and sound applications.

It also seems almost certain that Atari are going to launch an all-in-one CD-Falcon sometime during 1993. This machine – which we told you about five months ago – will comprise a CD-ROM unit and a Falcon in a brand new VCR style case with either a remote control or a reduced style keyboard – that is, without a keypad or function keys. Atari have signalled their intention to make this compatible with CD-I. This means that, on the machine's launch, there would already be plenty of titles available and more would be created to make use of Falcon's hardware. Thus whereas other CD systems suffer from outdated hardware and a paucity of titles, the CD-Falcon

would already have an impressive catalogue.

With all these additions to the Falcon range, it is becoming clear that Atari have developed a whole range of machines based on the 32-bit technology – not, as some periodicals have suggested, just the one machine. With the initial launch Falcon, the cheaper bundled consumer model in early '93, the Falcon040 in late '93 and the CD-Falcon at the same time, all that remains is for Atari to have a decent crack at the portable market. There can be little doubt that they have got a portable machine ready to be launched at the right time. If Falcon does as well as everyone thinks it will, then musicians and businessmen alike are very likely to be crying out for a portable alternative.

Development news

Meanwhile, the number of developers for Falcon continues to grow. *ST FORMAT* have discovered some extremely interesting development

projects being carried out on both sides of the Atlantic. These include RPG games, communications software and hardware, music packages and art programs.

■ The most promising snippet of information we've come by is that *DPaint 5* is being programmed by the American arm of Electronic Arts. If Atari bundled this with Falcon in '93 they would have a sure-fire hit.

■ ICD are working on two Falcon products that they are willing to discuss; the first is a SCSI tape streamer to enable standard Teak tape drives to be used for hard drive backup. The streamer is complete with just the documentation to be finished and will be on sale for \$100 in the US, which will probably translate to £100 in the UK.

They are also developing a professional version of the ICD Hard Drive Utilities, ICD claim that this new hard drive software will enable a 100 per cent speed

increase on the internal IDE drives of the Falcon030. The new hard drive software will cost \$50 in the US – probably £50 here. The ICD software in both of these items is custom written for the Falcon to ensure 100 per cent compatibility with the new machine. Contact ICD on ☎ 0101 815 968 2228.

■ ICS Electronics Corp (☎ 0101 408 263 5500) are working on something they call "DSP Simulations," although the project is not running at full speed yet because they have other work to complete first on other systems. They promise more details soon.

■ A company that goes under the modest title of Intergalactic Development are working on a murder mystery game based on the Jack the Ripper murders in 19th Century London.

You play the part of the detective in charge of the murder case, following clues around the

FALCON DEVELOPMENT SNIPPETS

■ Lexicon Software are an approved Silicon Graphics Developer and have had many years experience working on software for graphics work stations. The latest Silicon Graphics work station they are producing software for is the Iris Indigo, a 33MIP UNIX work station capable of 24-bit colour displays.

Their proposed Falcon software is almost identical to the Iris Indigo software and is directly compatible. During a recent demonstration at a show in the US, a Falcon and an Iris Indigo were running the same software side-by-side and nobody could tell the difference between them. The major difference, however, is in price – the Falcon will sell in the US for between \$799 and \$1,300, Iris Indigo workstations sell for between \$15,000 and \$37,000.

■ Whitney S Software, who wish it to be known that they have nothing to do with the famous AOR female singer, are developing a video-titling system for Falcon. "Low-end," we were told, "very low-end." The idea behind this is to make the system immediate, home-based and easy to use. There's no distribution deal as yet, but be prepared to get out those holiday movies.

■ Tongue-twister alert. Wuztek Omnimon Peripherals are getting together a delicious sounding Falcon video frame-grabber. It's a 24-bit, true colour beastie which runs in 320 x 480 resolution. The European distributors of this package are going to be Macro CDE in Germany and it's likely to set you back \$500 – \$600. At current exchange rates, that's about the same number of pounds.

■ The appropriately named Failure Prevention in California are working on a multi-media package designed to track down faults and solve problems in large engineering projects by asking a series of questions. The system is up and running on PCs and is used by the local power companies. Although the original graphics were created on an ST, the new software will be bundled with a Falcon and is likely to undercut the opposition.

■ Glankonian Software, also hailing from the States, are planning a TT-style paint program, a Bulletin Board terminal system and a integrated system similar to *Works*, which has a word processor, database, spreadsheet and all sort of goodies in one big package.



from HiSoft

Devpac 3 £79.95

HiSoft Devpac 3 is the latest version of the popular assembler/ debugger package for all Atari 680x0 computers. Packed full of features, it is the ideal programming environment for beginners and professional programmers alike.

Improved and extended, the Devpac 3 macro assembler is now often 40% faster than its predecessor (without using pre-assembly), has many extra, switchable optimisations and, with the ability to pre-assemble files for inclusion, can now claim to be the fastest assembler on the Atari computers. It produces 68000 up to 68030 code (via a user option) & supports the maths co-processors.

Devpac 3 is supplied with a professional 350-page, wire-bound manual, all the necessary include files for your system (ST/STe/TT/Falcon030), GST and Lattice linkers, various utilities, example programs and a complete 68000 Pocket Programmer's Reference Guide. Call or write for more details.

Wordflair 2 £129

We are delighted to announce, at last, the immediate availability of the English variant of Wordflair 2, version 1.1. The main features of this exciting, and long-awaited, package are:

- Full support for FSM GDOS which is included with the product
 - Much improved user interface
 - English language spelling checker and thesaurus included, with up to 5 user dictionaries. Plus hyphenation
 - Improved graphic handling including the ability to preserve the aspect ratio of the graphic, hide the graphic (for faster display) and find the graphic on disk
 - Expanded and improved region setup with a easier choice of Calc/Graph/Write regions
 - Enhancements to the database handling including the ability to import tab- or comma-delimited ASCII files
- Wordflair 2 is now in stock.

The package requires at least 1Mb memory or 4Mb if used with an Atari Laser printer.



The HiSoft Promise

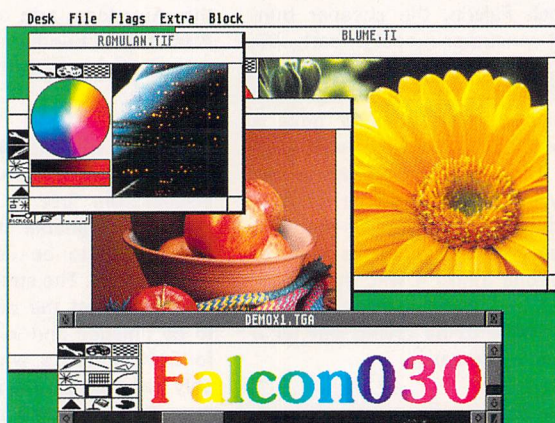
While many other companies are abandoning the Atari market, we are moving forward, acquiring and writing new titles, many of which are detailed on this page.

Rest assured that we will continue to offer you the best software at truly competitive prices with a range of customer support options to ensure that you can use your Atari 680x0 computer, and our software!, with confidence and ease.

We are very encouraged by the Falcon030, believing that it will breathe new life into the general-purpose microcomputer market, which has often been driven by the computer enthusiast, who will find this new machine both fascinating and exciting.

We will sticker all Falcon030 product with Atari-approved labels for convenience and clarity; there are three such labels - *Falcon030 Exclusive*, *Enhanced* and *Compatible*, watch out for them.

TruePaint £39.95



Due for release in November 1992, TruePaint is the first art package to take advantage of the true colour capabilities of the Falcon030 computer. Some of the highlights of the product are:

- Works in all resolutions including 768x480 True Colour
- Easy-to-use multi-window environment with menus, toolbox and keyboard shortcuts
- Full range of drawing tools
- A large variety of effects including shear, wrinkle, smooth, rainbow etc.
- Zoom, full screen mode with edit, colour picker, bezier curves
- Animation, FSM/Speedo GDOS support, wide variety of file formats including IFF, TIFF, JPEG and more

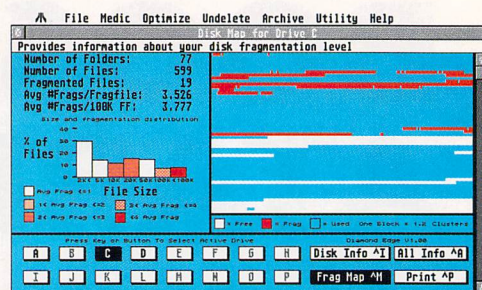
Watch out for more details of this exciting new package, or call us and we will send you a brochure when this is available.

HiSoft BASIC 2, Harlekin 2, Lattice C 5.5, HiSoft C, HighSpeed Pascal, FTL Modula-2, KnifeST, WERCS, HiSoft Devpac, Wordflair, Diamond Back, Superbase, Diamond Edge, K-Spread, K-Data, K-Word, FirST BASIC, HiSoft FORTH, ProFlight, Tempus 2 ...

All prices include UK VAT and P&P within the UK. Please call for export prices, educational discounts etc. E&OE. Specifications and prices may change.

Diamond Edge

£39.95



From the authors of Diamond Back, the popular hard disk backup program, comes a new package that is essential to any serious user of an Atari 680x0 computer.

Diamond Edge is a complete set of management, optimisation, diagnostic, repair and data recovery tools for use with floppy disks and hard disks.

XBoot 3 £34.95

We are pleased to have acquired the exclusive rights to version 3 of this package, which provides comprehensive management of your AUTO folders.

XBOOT is an efficient, easy-to-use program and comes with a well-written and useful manual.

Kuma Products

We have taken on the majority of Kuma Computers Ltd's products for the Atari and Amiga computers, while Kuma concentrate on their book titles.

We are re-compiling K-Spread 4 under Lattice C 5.5 and hope to end up with a faster, more compact product, which we will correct and enhance.

Superbase Professional £99.95

Following the sale of the ST and Amiga versions of Superbase to Oxxi Inc with whom we are working closely on a project for the Falcon030, we are pleased to be able to offer Superbase Professional (Version 3) at a substantial saving over its previous recommended price.

All HiSoft's products should be available through your local computer dealer. If you have difficulty in obtaining a title you can order directly from HiSoft using your credit or debit card - just call Julia, Sallie or Marlynn on 0525 718181.

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...Falcon040 continued

fog shrouded streets of White chapel. The game includes over 140 period-style pen and ink drawings of the streets of Whitechapel that have been scanned in to create an authentic spooky atmosphere to the mystery. For more details contact Ezra Sidron on ☎ 0101 319 323 5293.

■ Lexicor Software, designers of the impressive Phase 4 range of CAD and animation software for the ST and TT, are working on Falcon true colour versions of their software.

The present version of *Prism Paint* runs on the Falcon although the colour palettes are "not exactly correct" on the new machine. Lexi-

cor are also working on the software for a fully functioning genlock and imaging cartridge combination capable of 15-bit image capture. The genlock and cartridge have been designed by a company called JRI (John Russel Innovations) who have already completed the hardware side of the project. This should be available now.

■ Another project that we've heard about is *Phoenix 512*. This is a graphics package that gives you the ability to create 512-colour texture mapped animations using a scanline renderer. You can then put together your own high quality rendered images. You can contact Lexicor Software on ☎ 0101 415 453 0271.

DRAGON ON A BIT...

It is debatable whether or not we need another excursion into *Dragon's Lair* land, but Readysoft have gone and done it anyway. *Dragon's Lair 3 - The Curse Of Mordread* is, in all it's gloriously animated, er, glory, all set for November release.

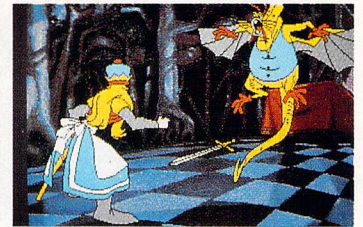
Cast back your mind to Dirk's first couple of outings... In the first one, he had to toddle off down to a

haunted castle and save the Princess Daphne from the evil clutches of Singe, the dastardly dragon. After that he had to escape from the castle and face the paranormal power of a psychotic Shapeshifter.

Oh yes, and there was an official sort of sequel, subtitled *Time Warp*, in which Daphne was whisked away by the dreaded sor-

cerer Mordroc. This time things are slightly different; Mordroc's wicked witch sister, Mordread, is, understandably, a bit miffed at her brother's demise at Dirk's hand. To get her revenge she has kidnapped your family and you have to brave hell, high water and full-screen animation if you're going to stand a chance of getting 'em back. Phew. You'd think that Dirk would just give up and retire to a quiet country cottage or something. But no - you're in charge, as you guide him through 60 scenes - and six disks - gawping at the 1,500 frames of animation, and gagging at the lack of hard gameplay.

With any luck, Readysoft have learned from the lessons - and appalling reviews - of all the previous *Dragon's Lair* animations, and remembered to include some vaguely flexible gameplay for a change. You'll read about it first in *ST FORMAT*.



■ "Eek! I've been turned into some kind of weird transvestite by one of Mordread's more effeminate spells..."

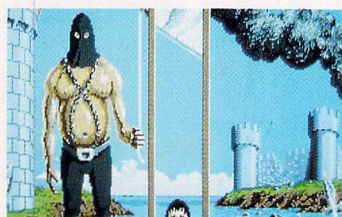


■ "...and now I'm being squeezed to death by Tweedledum and Tweedledee. I just can't make sense of any of this. This is the last time I appear in one of these daft games."

■ "Cackle cackle. You are doomed, Dirk. Your sword cannot match the powers of I, evil and downright unsociable Mordread." "Oh yeah?" "Yeah!" "Yeah?" Cartoon characters arguing again. Dearie me. Still, great artwork, eh?



BLOCKS AND BALLS



After conquering the enemy, it's always good fun to capture the survivors for a bit of public entertainment. There, got through the whole caption without saying anything like: "Be careful, you could lose your head playing this game."

Domark have a nifty conversion of a classic coin-op ripe for release just about now, actually. *Rampart* is set in medieval times and gives you the opportunity to take charge of a coastal castle, deploy some lethal cannons and lob cannonballs at advancing enemy boats.

But it ain't all vibrating trigger fingers. There's a bit of - gasp - thinking and, um, intelligence involved. Your cannons need to be placed carefully and strategically if you're ever going to get anywhere and, after every bout of blasting,

you're likely probably need to do a spot of rebuilding. This involves a *Tetris* style rotate 'em and slot 'em in part and, should you fail to patch up the castle in the allotted time, then the enemy takes enormous delight in blasting it to pieces a bit more easily next time. So your strategy has to be to place your cannons in sensible positions, build lots of new keeps to house new cannons and blast the enemy ships into tomorrow's seaweed. Review next month barring unforeseen circumstances.



■ In medieval times, bad town planning caused folks to build enemy castles right next to each other with only thin strips of water separating the two. Eventually everyone kissed and made up and such petty territorial disputes were resolved.

ASK THE FAMILY

Right, if you're one of the incredibly sensible people who has turned up to the Future Entertainment Show at Earls Court, then you'll be jolly pleased to hear that Andy Hutchinson, the Editor and Andy Lowe, Games Editor of this illustrious mag are giving a seminar. What this means is that you can toddle over to the Radio One Roadshow at 11.30am on Friday 6 November and listen to these two young men wittering on about Atari, the ST, the Falcon and the cost of beer at the Earls Court bar. If you're reading this after Sunday 8 November then you've missed us. Don't worry though, you can rectify this fault by coming next year. Who knows, the Falcon might be the talk of the show!

■ Come and meet this disastrous human in the flesh at the Future Show. He doesn't bite. Much.



■ Oh yeah, and Andy Lowe will be there too. Come and feel sorry for him.

BITS AND PIECES

■ Ladbroke Computing International have dropped the price of some of their Atari compatible mice. The Golden Image Opto/Mechanical Mouse is now £14.95 while the 290dpi Jin Mouse has dropped by £2 to £7.99. Contact Ladbroke on ☎ 0772 561071 for further details.

■ Ladbroke have also reduced the price of the Atari SC1435 colour monitor by over £70 to £179.95 including leads. Now there's no excuse for hogging the TV when everyone

else would rather be watching *EastEnders* or *Eldorado*.

■ Make your own animated films with *Videomaster!* This compact video grabber and sound sampler unit enables you to create your own 512-colour films on your ST and 4,096-colour films on the Falcon – it is due to go on sale on Saturday 14 November for £69.95.

You can also get hold of the Rave sampler for £19.95 – this a budget priced sampler

with full MIDI support. Contact Microdeal on ☎ 0726 68020.

In last month's *Feeling Partner* review we stated that Heavenly Music were the program's manufacturers. Heavenly Music are, in fact, a separate company, and they can be reached on ☎ 0255 434217.

Feeling Partner's distributors, Music Pro Imports UK, have been taken over by Zone Distribution, and their telephone number is ☎ 071 738 5444.

CLASSIFIED ADS COME TO ST FORMAT!

At last! You can now advertise your outdated or unwanted hardware in the pages of *ST FORMAT* – or you can see if anyone else has got what you want by advertising in the Wanted section. This service is available to you for the small sum of a fiver – just fill in the form opposite, (in BLOCK CAPITALS please) in 40 words or fewer, then tick the relevant boxes. Only telephone numbers can be printed – that is, not addresses. Put the coupon, together with a cheque or postal order for £5 made payable to Future Publishing Ltd into an envelope and send it to: *ST FORMAT* Small Ads, *ST FORMAT*, 30 Monmouth Street, Bath, Avon BA1 2BW. We're sorry, but we cannot take your small ads down over the telephone, so make sure you use this form.

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DAZED AND CONFUSED



■ The umpire's a pig and the cheerleaders are, er, also mammals of some description. The wacky and bizarre antics of "Bunny" – a rabbit who knows where his burrow is.

Last seen presenting the wonderful Ishar RPG, Daze Marketing have plumped for an easier going little affair in the shape of *Bunny Bricks* – a game which, we are told, is the first ever cartoon-style, arcade, brick-breaking baseball game to star a rabbit. Ever.

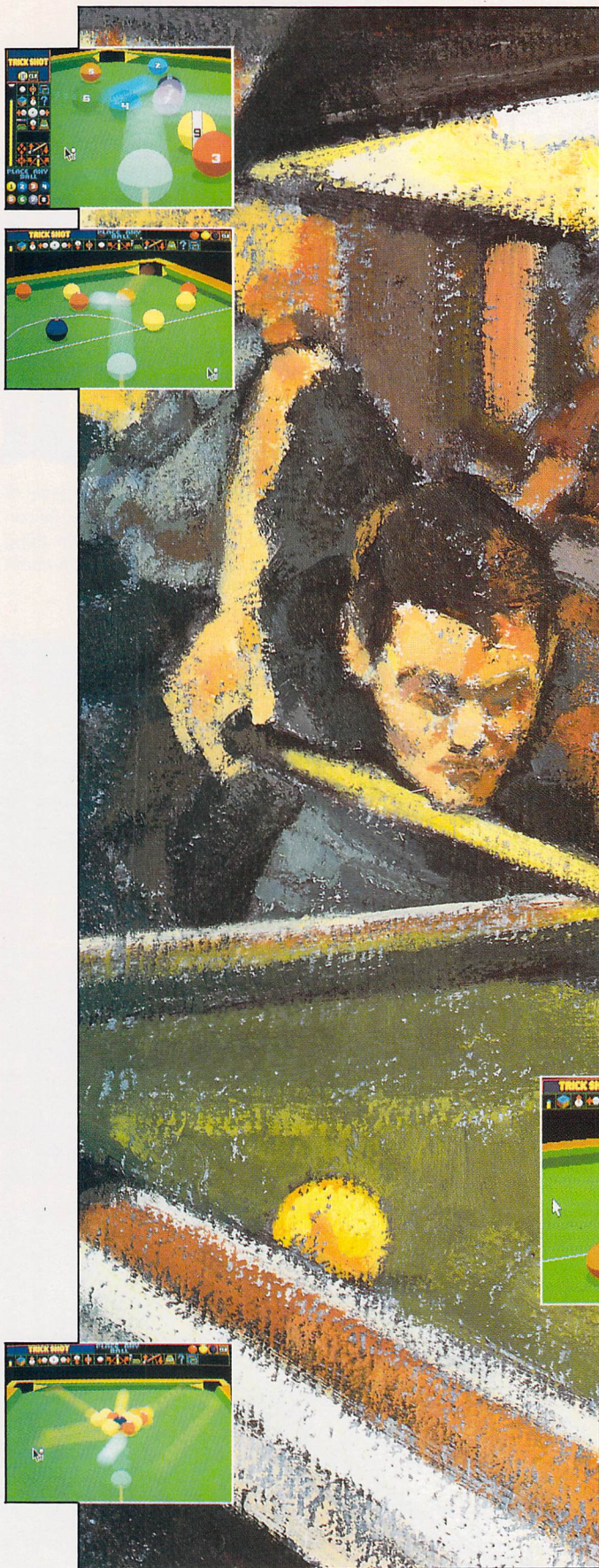
What we have here is a bunch of animated features in which our floppy-eared chum, Bunny – original name, there – must smash up piles of bricks with a baseball bat, while his chums, Sharky, Naf Naf, Cocky and Angel Einstein, generally get in the way

and look cute. Bunny has plenty of options to assist him – including multi-bats, machine guns, Super-bats and many more. Probably. The game is stuffed with bonuses, puzzles and riddles and there's a rather attractive digitised animation of the famous "in the pot" sequence from *Fatal Attraction*. Probably not.

Programmed by the acclaimed French Silmarils dudes, it's all a well-deserved thumbs up to cartoon guru, Tex Avery. It's also got no fish in it. Plenty of carrots, though.



■ "OK, Bunny. We want a good, clean bashing session. Remember – nothing below the bob-tail and come up thumping." Looks weird, this one, doesn't it?

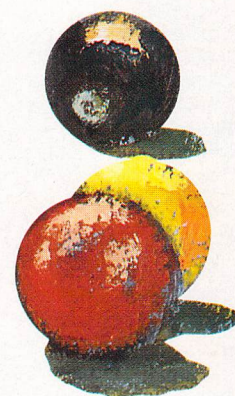
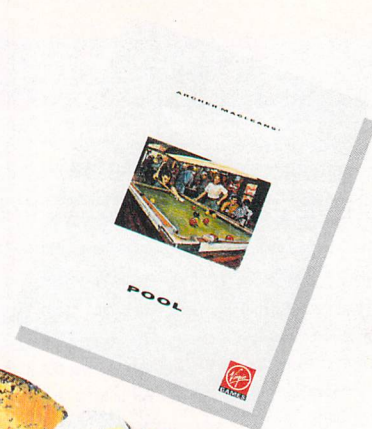


ARCHER MACLEAN'S

done for pool what he did for snooker. Brought it balls, rules, baize and all to the home computer.

Pool features **three sets of rules**: 8-Ball UK Coin-Op, and 8-Ball and 9-Ball US Pro. You can practice or play a single match against a friend or one of **20 computer-controlled opponents**. Or why not involve yourself in a **tournament** as one of eight players?

You can leave the cue and small change at home. Archer Maclean's Pool is all you need.



FROM THE AUTHOR OF JIMMY WHITE'S WHIRLWIND SNOOKER

POOL

FEATURES

- 8-Ball & 9-Ball Play ● CoinOp & Pro Rules ● 8-Player Tournaments
- Special Trick Shot Table ● 20 True Computer-Controlled Opponents
- Fully Interactive Televisual Display.

Virgin Games 338A Ladbroke Grove London W10 5AH



VISION ON



You're ambitious, you're creative, you look to the future instead of harking back to the past. Don't just sit there, do something about it - thrust yourself into the glorious world of multi-media, introduced to you by Andy Lowe, Chris Lloyd and Clive Parker



That old Hollywood adage "too much reality is not what the people want" fits somewhat awkwardly into the world of ST home computing.

The phenomenon of Virtual Reality proves that people are unimpressed by the prospect of merging their "real" experiences and interests with a more symbolic domain, no matter how clumsy the interface. The technology of Virtual Reality isn't quite at the level of universal acceptance - but, with the Falcon imminent, much talk of this multi-media thing has been flung recklessly around and it's about time we put you in the picture.

PICTURE THIS - MULTI-MEDIA DIY



Got an ST? Fancy trying out this multi-media lark? But - instead of diving straight in at the real-time or decompression end, you'd much rather dip your toe in the water of, say, an animated film or demo... just to sample the way in which multi-media is applied. Give it a go

1

Write it

Use *Protext* - easily the finest word-processor available on the ST. Great printing facilities turn a powerful program into an essential buy. But - you don't have to buy it at all. It's on this month's Cover Disk. Hurrah!

■ **Summon the creative muse and knock up a script or three. This is the best we could do. Sorry.**

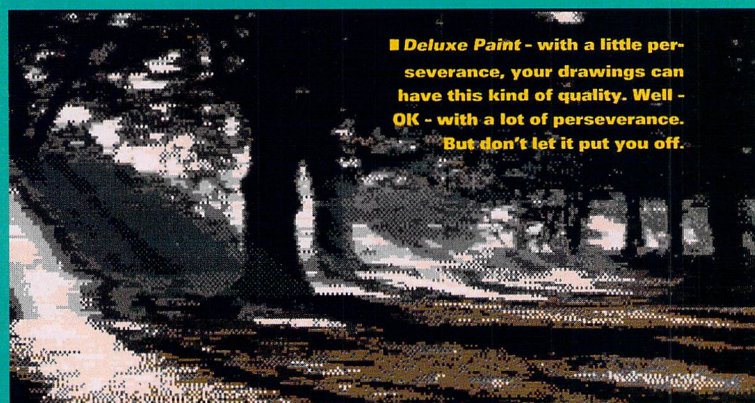
```
PROTEXT Document PROTEXT1.SAV 1K MW "AutFn" SCR F3 for Me
Ch 854 Line 20 Col 41 Insert Mks J 04:04:
DESIREE OYVORON ULLI IN - "THE CASE OF THE UNDERWASHED RECEPTACLE"
1. INT. Kitchen. DAY.
Middle-distance shot of ALFRED. He has his back to us and is evidently leaning
over the sink, furiously washing dishes. Great plumes of soap-bubbles surround
him and his scrubbing.
FX: Scrapping, sloshing, clanking, clinking. Perhaps the occasional grunt of
complaint.
CAMERA: Slowly close in over following...
VOICE OVER (Gruff and ominous)
Alfred Enzyme was a man of great foresight, intelligence and understanding. He
lived alone in a sparse but comfortable abode.
CAMERA: Beginning to speed up its approach...
VOICE OVER
But, Alfred's life was to change - the day he...
FX: Jarring chord.
VOICE OVER
...left a trace of a stain on a tea-cup.
A knife appears from the right-hand side of the screen...
```

2

Make it look good

If you're an arty type, you probably want to design your own background graphics. In this case, *Deluxe*

Paint is the art program for you. It has many gorgeous features, including the all-important animation section. Available from Electronic Arts at ☎ 0753 549442 for £59.99.



■ **Deluxe Paint - with a little perseverance, your drawings can have this kind of quality. Well - OK - with a lot of perseverance. But don't let it put you off.**

3

Make it look original

Not of the arty persuasion? Or perhaps you just want to make your backgrounds more original or surreal-looking. You

could try digitising them and importing them into your art program. Then, get things moving over the top of the image. So, you could feasibly have a cartoon character wandering around over the top of a digitised picture of a rainy, dingy old street. Weird. Digitise those images with *Vidi-ST* - available from Rombo on ☎ 0506 414631 at a cost of £99.95.

■ **This texture-mapped, ray-traced image was imported into *Deluxe Paint* and then fiddled around with. You could say something like: "Worshipping at the altar of multi-media..." But we'd rather you didn't.**



4

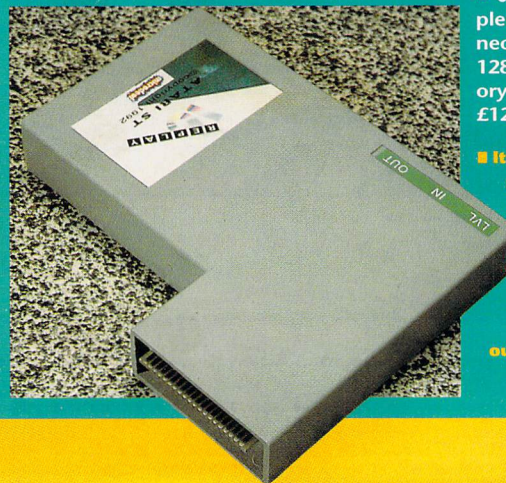
Sound

The ST isn't exactly famous for its ear-splittingly astonishing internal

sound chip which is why many commercial games and demos use samples. To slap some sound into your DIY effort, try the *Replay 16* from Microdeal on

☎ 0762 68020. A sampler that can simultaneously hold up to 128 samples in memory and only costs £129.95. Super.

■ **It's hard to believe - but this L-shaped, er, box is actually a powerful - and affordable - sampler. Get that Funky Drummer record out now....**



More than one medium

Multi-media is, essentially, just what it says – applications and software which make use of more than one data medium. It's a loose term which can have slightly altered implications on different levels. But, depending upon how far you actually want to delve into it, the benefits are enormous and, for ST owners and general Atari enthusiasts, Sam Tramiel's recent claim that the Falcon is the first true multi-media machine are exciting enough to signal a new stage in personal computing. With a machine that can be truly described as a multi-media-friendly "combo box," we may be getting closer to breaking down that elusive real-world interface at home.

This word "interactive" has become almost standard in the computing industry. Infocom called their adventure games "interactive fiction" beginning an increasingly rowdy spate of pushing and shoving to produce the first truly interactive experience. It's a lot like the sense of disbelief-suspension when you're watching a film. Whether you're reclining in some plush

**Just forget about PCs.
Falcon 030 soars above
'em in every category -
including multi-media.
Apply now. The future
starts here.**

cinema or lounging around on a second-hand sofa, the experience is supposed to be the same – you power yourself down and power-up the world of the film in your imagination. The interface between you and the software or film is worn so thin that you, ahem, "enter" the world of the medium.

A group of clairvoyants

In the film *Blade Runner*, Harrison Ford's character uses a voice-controlled slot-in machine to

analyse a photographic image. Because the film is set in the future, it's not made clear whether the image is meant to be 3D in the first place, but the time for the commercial use of this kind of technology is not far away.

Military enhancement capabilities are nothing short of awesome – wherever you are, you may actually be being occasionally watched by someone. Of course, this may be a little disconcerting for you and I, but for Bobby Davro, it's welcome news. Here at STF, we use a combination of ST and Macintosh technology to freeze, enhance and manipulate 2D images from software to use as screenshots. Ten years ago, the mere idea of this would have seemed like science fiction...

So, with Falcon geared up to storm into Dixon's any day now, and with Sam Tramiel proclaiming it as a "revolutionary", all-in-one combo-box, you're going to have a seriously wonderful multi-media workstation on your hands. Just forget about PCs. Falcon030 soars above 'em in every category. Including multi-media. Apply now – the future starts here.

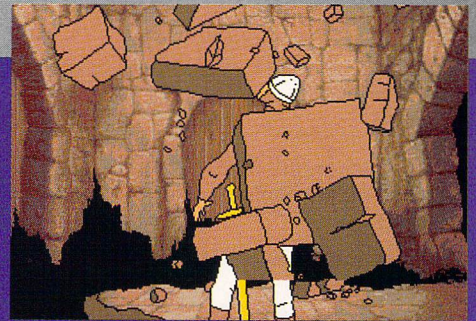
MIXING YOUR MEDIA

If you think of Fleet Street when we mention this media business, here's the lowdown on some of the more major tabloids - er - data media and types of multi-media application

**GAWPING
Laser Disc**

These are CDs which come in different sizes, depending on the job they need to do. Remember the old Betamax format? Well, soon we could be saying: "Remember the old VHS format?" No longer will you be slotting in that cassette and sitting back to two hours

of CEEFAX. Laser disk players, previously seen as over-expensive luxuries, are finally catching on – they are shamelessly storming into the market previously occupied by the video cassette. The surprise is that laser discs are far from new. Around eight years ago, they enjoyed a stormy relationship with the amusement arcade. Games like *Dragon's Lair* and *Space Ace* used laser discs to store a series of animated cartoon scenes which the player, by various joystick actions, accessed. These games demonstrated the good and bad points of laser discs – wonderful sound, fast access, incredible visuals – but very little gameplay. Home entertainment seems like the perfect place for them.



■ The first application of laser discs in the arcade - *Dragon's Lair*. It's an incredibly crap game, which would make a brilliant cartoon and, considering the direction in which laser discs are going, it probably will.

**LISTENING
CD - Compact Disc**

A disc from which information is extracted by laser action. CDs really began to establish their position in the music industry around 1986. This had nothing to do with that Dire Straits album, but it was as a result of one of the key words of the '80s and '90s – convenience. Over recent years, one of the big controversies surrounding CDs has been their price. In the case of the music business, it's true that CDs retail for inflated prices in comparison to their manufacturing costs, but,

like any established data medium, the price is slowly starting to come down – indeed, in the US, CDs are a lot cheaper than in the UK. The massive storage space – the big advantage of the format – is leading them further in the direction of home computing. The days of the 3.5 inch floppy could, indeed, be numbered.

■ The laser disc. The future of home entertainment? Well - er, perhaps if you overlooked that T'Pau CD... maybe you could believe it.

**MIXING
Applications Software**

Atari have a new machine on the way. Bet you didn't know that, did you? It's a 32-bit megabeastie called the Falcon and it can do the kind of thing you see here so much better – both visually and aurally. The icons at the base of this PC application, *The Multi-media Encyclopaedia Of Mammals* enable you to manipulate data in many ways. You can hear what the animal sounds like, check out pictures of various examples of the species and even watch a brief film of dolphins swim-

ming about. If this kind of expert-system is what you're looking for, it will be easily attainable on Falcon. Watch and wait.

■ Amateur David Attenboroughs pay attention. One of the beauties of multi-media is the number of different things it can turn its hand to. If you want to find out everything there is to know about a certain species – say, duck-billed platipi – you can. People may laugh at you – but go ahead anyway.



THE PRESENT

Imagine working on a DTP package on your ST where you have choice of thousands of fonts on a CD-ROM disc supplied with the program. This is not fantasy, these sorts of discs are already available for PC and Macintosh applications and are soon to be in use on ST and Falcon setups. With new interfaces available, STs can now link to industry standard CD-ROM drives and access the vast amounts of data available on CD-ROM discs. With the advent of new floptical disk technology, possibilities for the ST are expanding.



■ This nondescript looking piece of kit could change the way that the ST is used by opening up the world of CD-ROM to all Atari's machines.

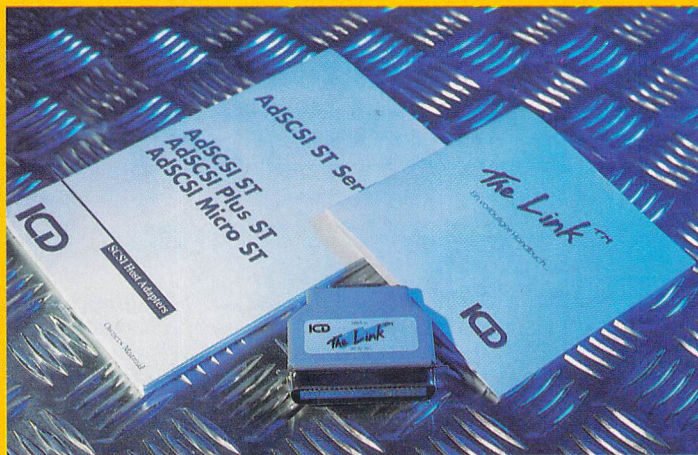
The Link - a vital breakthrough for the ST?

The main problem with the ST and advanced technology like CD-ROMs and floptical drives has always been the problems with interfacing the two together. ICD have now come up with The Link (£59 from Gasteiner ☎ 081 365 1151, see review page 113), a host adaptor which

enables any ST to connect directly to any SCSI or SCSI2 device. This covers CD-ROM drives, floptical drives and hard drives.

The Link is different to previous adaptors because it plugs directly into the SCSI port on the device you wish to connect your ST to. A standard DMA hard drive lead is then able to connect the Link to your ST. Previously, all adaptors were built into the hard drive case adding a hefty sum to the price of the drive. Because the Link is a separate unit, there is now no need to build Atari specific drives.

The final element is some software to drive the exotic devices you're planning on connecting to your machine. ICD are finishing off the final part of the driver software, called MetaTOS, which is to enable data on PC CD-ROMs to be read. Huge amounts of data in CD-ROM form are soon to be within easy reach of ST owners.



Videomaster by 2-Bit Systems

2-Bit Systems (otherwise known as Audio Visual Research) are making their play into the world of multi-media with the advent of their latest plug-in device for the ST, the Videomaster. This exciting new device slots into the cartridge on the side of the machine and works in virtually the same way as the more famous sound sampler created by 2-Bit. The basic unit is a combined video digitiser and sound sampler, enabling you to record and process both sound and vision.

The digitiser enables monochrome quarter-screen pictures to be grabbed at 25 frames per second directly from a VCR or video camera

Video clips can be combined with sound samples to make ST generated films.

for playback at full speed. Full screen still pictures can be recorded from a VCR or camera in 16 greyscales, or in 16 or 512 colours from a video camera using the filters provided. Pictures can be saved to disk in *Degas*, *Neochrome*, IFF and *Spectrum 512* formats. The Videomaster is

the first video sequencer for the ST and it works in exactly the same way as a sound sample sequencer. Video clips can be combined with sound samples to make ST generated films and sequences, the length of the sequence you create is limited only by memory size. A Public Domain video sequence player program is also provided so that any sequences you create can be played back without needing the main software. Quarter size sequences of film can either be overlaid on to a full size still background or on to a moving background using a picture-in-picture technique.

You need a minimum of 1MByte of RAM along with a colour monitor and double-sided disk drive to be able to do all this. On the Falcon the program can provide 4,096 colour video grabs in true colour mode, with extra true colour modes being developed.



■ Using an electronic RGB splitter with Videomaster, colour grabs like this can be made from any video source on the ST and saved in *Spectrum 512* format. Well, not exactly like this, you have to have the correct tape in the video recorder first.

■ Even without an RGB splitter, excellent results can be obtained on an ST with Videomaster. While grabbing the pictures you can grab the sound at the same time and create your own little video films. Watch out Ridley Scott, the ST is coming.



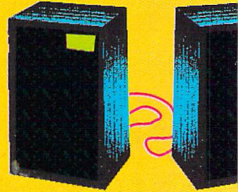
Atari CDAR-504 CD-ROM drive

Atari entered the CD-ROM arena, then left it again almost immediately back in 1989 with the CDAR-504. This was a CD-ROM unit designed to plug directly into the ST DMA port for CD-ROM functions and also to be able to play standard music CDs through the home stereo. While the machine was a technical success, it was never actually launched on to the market by Atari, although there are reports that a substantial number

Atari entered the CD-ROM arena, then left it again almost immediately.

were produced and are sitting in storage in a warehouse somewhere.

It now looks as though any chances of an Atari built CD-ROM drive being released on to the market has passed, with only two CD-ROM titles ever being produced. One of the titles was the parts inventory for a Boeing 737 – not really the top item on your average shopping list. The main reason touted for the drive being dropped was the lack of support



for the Atari CDAR-504 platform – although it would appear to be very difficult to develop software for a machine that you can't get hold of. Atari now seem to have abandoned their CD-ROM drives in favour of providing compatibility with industry standard devices by means of the SCSI2 and DSP ports on the Falcon.

■ The infamous CDAR drive from Atari. If they had just managed to get some software developed, Atari could have been years ahead of Commodore CDTV and Philips CD-I. That didn't happen, however, and the CD-ROM never appeared.



Floptical drives - a new storage medium

The latest technology to appear in the ST world is the floptical drive. A floptical disk looks exactly the same as a standard 3.5inch floppy disk – the major difference is in the high density magnetic coating giving a storage capacity of 21MByte on a single disk. Floptical disks use barium ferrite (BaFe) for the magnetic coating on the floppy, a material which is much more reliable than standard ferrite coatings. This enables much higher track densities to be created, 1,245 tracks per inch (tpi) instead of the 135 tpi of standard disks.

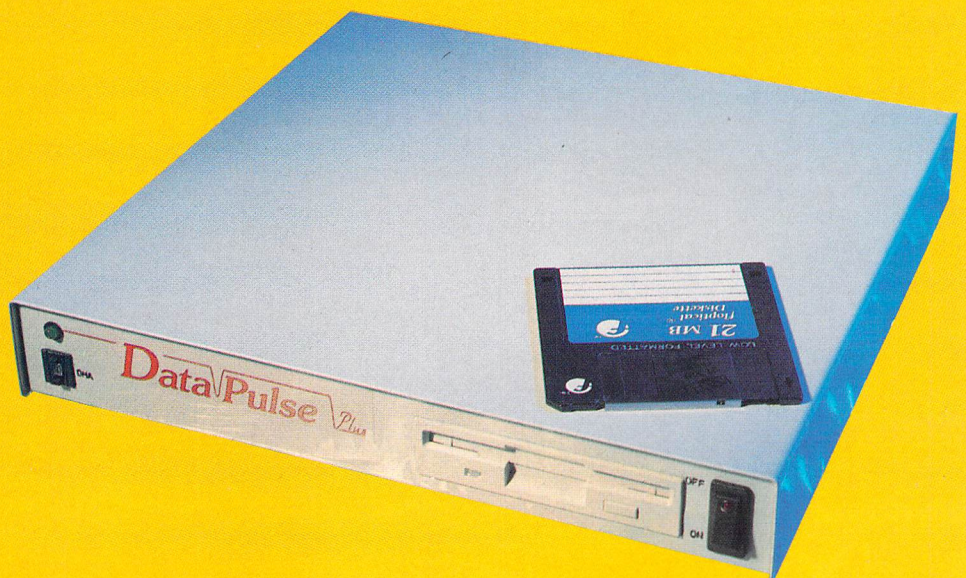
The optical part of the drive is the tracking mechanism. Because of the high track density of the disk, an extremely accurate tracking system is necessary to read and write to the disk. The surface of the disk has concentric tracks (servo tracks) embossed on to it which cannot be altered, damaged or erased in any way. An infrared LED shines on to the servo tracks and the reflected light is picked up by an optical lens which guides the read/write heads to the correct position over the data. In this way, these servo tracks act as highly accu-

rate guides for the drive heads ensuring pinpoint positioning and elimination of errors.

The actual drives are SCSI devices and can be driven by ICD host adaptors and software, physically the floptical drives are the same size as a 3.5inch floppy drive. Floptical drives can also read and write to standard 720K and 1.44MByte floppy disks, so you can use a floptical drive to read any 3.5inch floppy disk. The

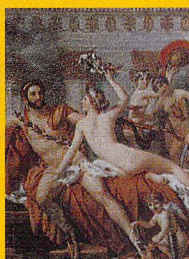
large amount of data that can be stored on a floptical disk makes it an ideal medium for multi-media applications – with 40MByte and 80MByte 3.5inch floptical disks under development this medium is likely to become popular. Ladbroke Computing International (☎ 0772 203166) are soon to be selling a standalone floptical drive for £439.99 with 21MByte disks costing £24.99 each. See our review on page 114.

■ When this ordinary looking floppy disk is put into this equally ordinary looking floppy drive you suddenly have multi-media potential. This is a floptical disk and drive, and this disk has a 21MByte storage capacity when formatted.



IN THE FUTURE

■ That enigmatic smile says it all, "I've got more screen modes than you, so yar-boo sucks." The Falcon delivers VGA-bashing visuals like this.



All the ports you could ever want are built in too – including SCSI 2, IDE and DSP connectors – so a wide range of industry standard devices can be hooked up. This makes the Falcon a potentially dangerous machine in the multi-media scene. At the recent Glendale computer show, Atari presented a full screen Tina Turner video with all colours of the rainbow and 16-bit stereo sound with all kinds of special effects. Multi-media has finally got a machine to do it justice



Long before the buzz words and trendiness factor of multi-media came into being, Atari were already developing multi-media software to run on the ST. In the Falcon, the hardware moves up several notches with the power of a full 32-bit processor and the stunning

DSP chip – that's a Digital Signal Processor to the rest of us. This little wonder can fiddle around with digital signals at a hell of a whack, so audio and video signals can be processed in real-time. The multiplexor chip controls all the housekeeping so the co-processors can be assigned tasks and left to chug away on their own.

that doesn't involve you having to investigate a second mortgage. True and powerful multi-media applications are on your doorstep.

Eyes up front

The Falcon delivers eye-popping graphics in a squillion colours – 262,144 to be exact. There is a multitude of graphics modes up to 768 by 480 pixels in size with a cornucopia of 65,536 colours on-screen. A built-in graphics co-processor

AND IN THE RED CORNER

Multi-media has been hanging around waiting for a cheap platform to arrive. And what do you know – along comes a whole bunch at once, and some are a lot cheaper than others. To make the most of it you really need 8-bit colour and sound, and access to large capacity storage. Plenty of systems have that – what they can't match is the Falcon's 16-bit colour, sound and magical DSP chip at anything close to the price

Macintosh

The Macintosh is held in high regard as a professional piece of machinery – everything is slick and compatible with almost nothing. The price you pay for all this is money – and absolutely loads of it as well. To get a decent multi-media platform you need an 030-based machine with colour. That means you need at least a Mac SE not to mention a spare £2,145 in your wallet.

If you want to add a monitor you need another few quid – £290 for a 512 x 384 pixel 12 inch screen or a more impressive 640 x 480 13 inch screen at an equally more impressive £595. And that just gives you 8-bit colour and sound. Getting

■ For some strange reason, everything Mac related comes with an impressive price tag – strange but true.



a Mac to do the Falcon's 16-bit sound digitising act means you need to add a DSP card and that's £1,000. And all this is without even investigating any software.

There are two new multi-media Macs due for release shortly – the Vi and Vx, which are to have built-in CD-ROM drives and might squeeze in at £2,500 before you start adding things like DSP cards. If Apple had to survive on home sales they would have gone bust a long time ago – they sell sexy machines at withering prices.

COST: £2,500 and quickly zooming out of sight

PC-Contemptibles

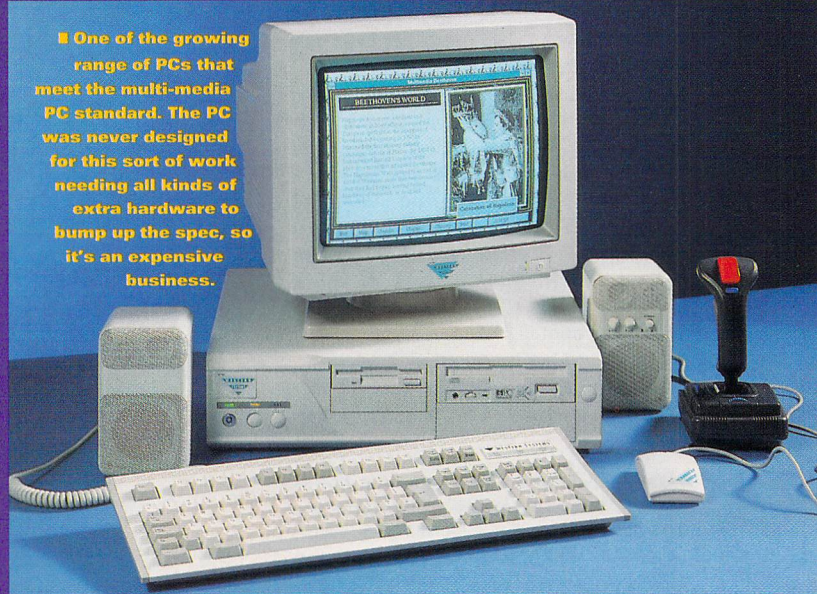
The PC was never designed to be a multi-media machine and getting a system capable of achieving it means mixing and matching components. Companies are catching on to this and releasing bundles ready set up, but the prices start at wallet-crushing and rapidly move upward. For starters, the central processor has to be a beefy 386 to keep things moving at more than a snail's pace. You need VGA, or better still SVGA, graphics cards to get the display up to 256 colours.

To match the Falcon's display means adding a 16-bit graphics card – that's another £175. The sound department

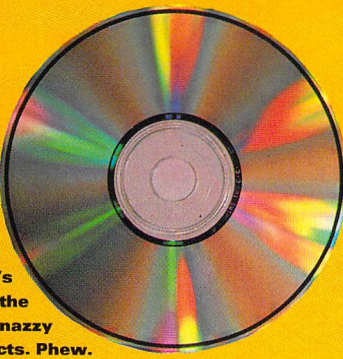
needs some attention too – you need a sound card to get more than strangled squeaks. To come anywhere close to the Falcon's sound, you need a Soundmaster Pro card or something similar – that's £200 straight off. Add at least 4MBytes of memory and a hard drive and preferably a CD-ROM drive and Video digitising card. If you want full screen full motion video that means another expensive card such as a DVI or a Mediaspace for compression in real-time – start saving, though, since they start at over £1,000. Alternatively you could sell your furniture or send your small children out to work.

COST: £1,200 bare minimum and rising rapidly

■ One of the growing range of PCs that meet the multi-media PC standard. The PC was never designed for this sort of work needing all kinds of extra hardware to bump up the spec, so it's an expensive business.



■ Admit it, you were impressed when you first heard CDs, weren't you? The Falcon beats this, you can edit it to your heart's content and use the DSP chip to add snazzy effects. Phew.



Multi-media has finally got a machine to do it justice that doesn't involve you having to investigate a second mortgage.



sor makes things zip along. It can handle overscan, so there are no borders and it can also accept an external video sync for genlocking and an overlay mode for video titling and special effects. Add in the DSP chip and it's starting to look like a serious graphics engine. Video digitisers are on the verge of being released offering full screen video digitising and sequencing.

Ears to the side

Your eyes are in for a real treat, the Falcon sound capabilities are seriously stunning, boasting better than CD quality with the ability to route it through the DSP chip for an array of effects including surround sound, graphic equaliser, echo, reverb, flange – and loads more. It doesn't stop there, either – built into the Falcon is a full 16-bit sampler. Just plug in your

■ "Look at the state of those fingernails – yuch, you've been gardening again, haven't you?" Subtlety was never one of God's strong points. Smart graphics, though, aren't they? The Falcon sports an amazing palette of over 65,000 colours in better than VGA resolution. Image retouching, filtering and digitising are all waiting in the wings.



sound source and you can sample anything on to a hard drive. Playback is eight track up to 50 KHz and CDs are sampled at 44.1KHz. Compression helps reduce file sizes by up to a factor of four. Using DMA – Direct Memory Access – the Falcon can play the sounds while the main processor is free to get on with other things. All this, along with MIDI ports, means the Falcon packs a formidable audio punch. **stf**

Compact Disk Interactive

Enter into the home multi-media industry the mighty consumer electronics firm Philips with Compact Disk Interactive – better known as CD-I. It's like Commodore's CDTV – basically it's a CD-ROM drive coupled to a computer.

The heart of the machine is a customised member of the 16-bit Motorola 68000 family with 1MByte of memory and a handful of co-processors handling the input-output side of things. The display is 384 by 280 pixels non-interlaced with up to 16-bit colour – that's 65,536 colours at once, although to save space and speed things up there are lesser resolutions.

The same goes for the sound – it's up to the quality of compact discs but has what's known as

"speech quality" so it's possible to hold longer sections in memory. Full screen full motion is, as yet, missing, but a hardware add-on containing decompression chips should be available pretty soon – and that's likely to bump up the price up by about £120.

Philips' is a strictly play-only device – there is no provision for creating or saving your own stuff. With the big boys backing it, CD-I should be well supported but the drawback is the relatively simple hardware at the heart of the machine and lack of expansion possibilities. **COST: £599 basic unit**

CDTV

Billed as a true multi-media machine, Commodore's CDTV – Compact Disk Total Vision – is an Amiga and a CD-ROM drive bundled together in a black box. It hit the streets before Philips' CD-I and had a large pool of existing software to draw on. Unfortunately, it's still using the Amiga's 16-bit technology with little prospect of this being upgraded. Although you can play standard audio CDs, sound played during applications or games is the standard 8-bit Amiga affair.

Graphics mostly are either low resolution – that is, 320 by 256 pixels in 4,096 colours, or in high resolution – 640 by 256 – pixels in 16 colours. Both resolutions can be interlaced, bringing the vertical scale up to 512 pixels though this gives a few problems with flickers.

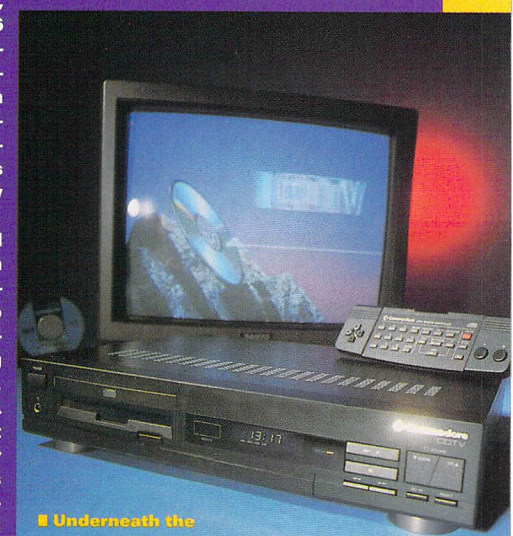
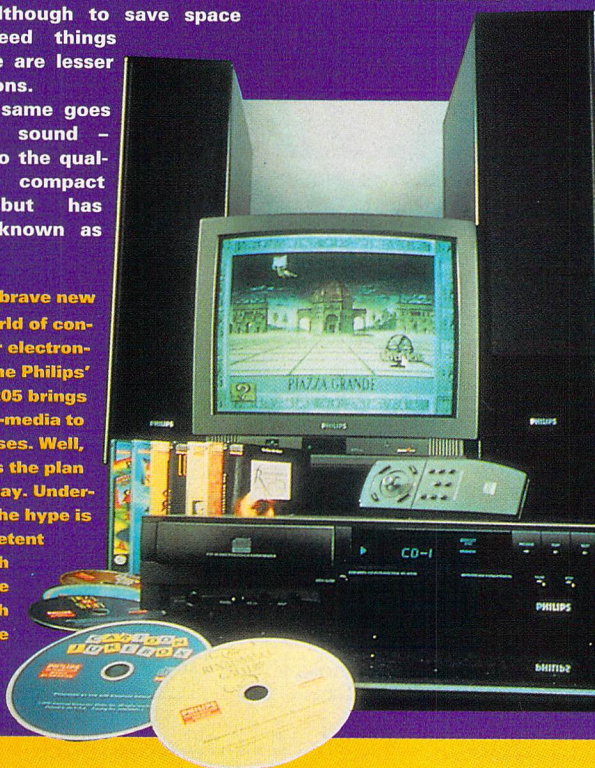
Animation is limited by the rate that data can be pulled off the disk – meaning it is all read into memory before it's displayed, severely limiting the length of any clips. There is a special CDXL format to try and get round this problem for animated clips, but it is limiting only being a quarter screen in size in 32 colours.

Commodore weren't sure how to market CDTV at first, insisting that it isn't a computer, now they have given in and relaunched a multi-media

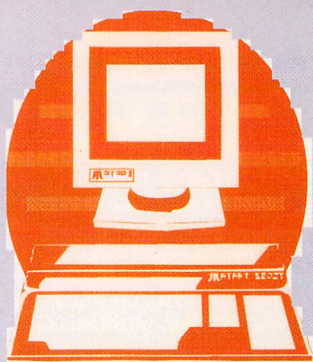
home computer pack at £499 including a keyboard, mouse and disk drive. The system can't really be used to author your own creations since there's no provision for a hard drive.

Consumer multi-media is a new market, pitched somewhere between the video recorder and home computer-markets. CDTV and the rival CD-I were the first to make the initial moves. The CDTV, for all the hype, is stuck with its Amiga ancestry – typically using this year's concept but backed up by last year's technology. **COST: £399 base unit**

■ The brave new world of consumer electronics, the Philips' CDI 205 brings multi-media to the masses. Well, that's the plan anyway. Underneath the hype is a competent enough machine with nowhere to go.



■ Underneath the black consumer-product box is a fairly standard Amiga based on 16-bit technology. The concept is all there, but the raw power isn't.



HCS

Memory

MEMORY UPGRADES

HCS STE and MEGA STE UPGRADES

HCS STE memory upgrade kits come complete with full instructions designed for the novice. The complete job should take no longer than 15 minutes. 2 and 4 megabyte kits come with free utilities disk and multitasking software.

Upgrade from 520 to 1040£13.99
To 2 Megabytes£44.99
To 4 Megabytes£84.99

STF (M) and Mega ST upgrade kits

Xtraram Deluxe plug in upgrading system fits inside the computer. It can upgrade your computer in stages to 1Mb, 2.5Mb* and 4Mb. The kit comes with comprehensive instructions designed for novices. The kit uses SIMMS, so is easily upgradeable.

MARPET XTRARAM *Deluxe* QUALITY SIMM UPGRADING SYSTEM (formerly frontier)

Upgrade from 520 to 1040£44.99
To 2.5 Megabytes.....£79.99
To 4 Megabytes.....£119.99

Solder in Kit

The solder in kit will upgrade the 520ST to 1Mb. Electronics experience is required as much soldering is needed. Check your RAM chip configuration before ordering: 4 or 16 chips, SMD or DIL packages. 16 chip DIL version comes C/W sockets

Solder in kit (all versions)£25.00

REPLACEMENTS

The HCS power supply and disk drive upgrades come complete with fitting instructions and plug straight into the ST without soldering. The Power supply produces less heat than the original so is more reliable.

Replacement power supply£39.95
Double sided disk drive kit£47.00

ACCELERATORS

The AD speed made by ICD fits in place of your microprocessor. It uses a 68000 chip running at a switch able 16Mhz with cache or standard 8Mhz to give virtually 100% compatibility. The 68030 SST for the Mega ST gives phenomenal speed with a 68030 running at 50Mhz! The SST has space for 8Mb on board RAM, TOS2 included.

AD Speed ST.....£145.00
AD Speed STE£165.00
68030 SST - 50£550.00
Fitting for above£35.00



INTERFACES

The "AdSCSI" ICD host adapter gives SCSI output from the STs DMA port, complete with software and full documentation, DMA cable and hard drive formatting software. Multirez allows the ST to display all 3 ST resolutions on the multisync monitor. The forget me clock sets your STs time and date, with cartridge-through port.

Keyboard interface allows the use of external PC compatible keyboards on the ST.

AD SCSI.....£69.99
AD SCSI Plus (with clock)£79.99
Keyboard Interface£55.00
Multirez£44.99
Forget Me Clock.....£16.99

MONITORS

14" super high resolution 0.28mm dot pitch monitor is compatible with the TT, PC, Falcon and Multirez. The new HCS MM140 Monochrome monitor has tilt/swivel base and 14" tube. Fully compatible with all monochrome ST software.

Multisync colour monitor£280.00
MM140 14" FST Monochrome£115.00

PC EMULATORS

The Vortex 386 emulator runs at 16Mhz and allows true multitasking in PC mode on the ST. Space on board is provided for a 387 CO Processor and 512K of FASTRAM. Norton factor 15!

VORTEX 386 SX-16£330.00
387 CO-PROCESSOR£117.00
FASTRAM CACHE£30.00

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SPECTRE GCR MAC EMULATOR

Spectre GCR cartridge gives 20% more speed and 30% bigger screen area on the standard ST. Compatible with the TT.

SPECTRE GCR (Inc. 128K Roms)£300.00

Atari TT2£950.00

PROTAR HARD DRIVES

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Progate II 40DC£349.99
Progate II 50DC£369.00
Progate II 120DC£469.00



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Enquiries cannot be taken by post.

For mail order please send description of goods and cheque/PO to:



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Croydon CR0 8RJ



Prices include VAT and P & P
 Goods normally dispatched within 2 working days.

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HCS Smart Modem 9600 has full FAX capability for send and receive. Auto-answer, pulse or tone dial, automatically determines incoming calls as fax or modem, industry standard command set with support for V22bis, V22, V21. Fully Hayes compatible. All types c/w PC software. ST fax software option supports most ST graphics formats including Print Drives for Pagestream and Calamus for immediate composition and send. Modem 2400 has all above features but without fax. Smart One 14400 comes with MNP level 1-5 and fax capability. Using V42 bis gives a maximum effective thput of 58000bps!!! All types come complete with cables.

Smart One™ Fax with ST FAX software..£139.99
Smart One™ Fax with only PC software £119.99
Straight Fax software.....£45.00
Smart One™ 2400£59.99
Smart One™ 14,400 FAX MNP V32, V32 bis
V42, V42 bis etc£249.99

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COVER DISK 41

As a 3.5inch file frenzy assaults your senses, Chris Lloyd waves the Cover Disk around and tries to keep away from strong magnets

SPECIALS THIS MONTH

AIR SUPPORT

Strategy and flight sim combine in a riot of high-tech destruction.

Page 24

HYPERBASE

Create your own incredibly tasty multi-media world with a well-flavoured mix of text, graphics and sounds.

Page 27

SOUND LAB

Brilliant well-featured sample editor so you can lick those sounds into shape.

Page 29

GFA SPEC

Want 512 colour pictures in your GFA Basic programs? Now's your chance.

Page 27

STOS FIX

Are you having trouble getting STOS Basic to work on your Mega STE or TT? Your worries are over now with this little utility.

Page 25

GIF2RAW

Convert all those attractive and interesting-looking GIF pictures into RAW files.

Page 25

MANDALA

Hypnotic patterns for high res monitors.

Page 29

ASSEMBLY LISTINGS

A password protection system for assembler coders.

Page 27

STOS LISTINGS

Sprite routines for STOS Basic.

Page 25

COVER DISK BACK-UP

The easiest backup program going.

Page 29

Air Support

BY: PSYGNOSIS

RESOLUTION: LOW ONLY

FOLDER: AIR_SUPP

FILES: AIRSUPP.PRG, DEMO.BIN,

READ_ME.DOC

READ: READ_ME.DOC

GET STARTED WITH: AIRSUPP.PRG

The reality of war is horrible, isn't it? There's just no way round it, but a spot of guilt-free enemy blasting and Napoleon impersonations never hurt anybody. In the future, war has become so complex that battles are waged on Chaos Corporation mainframe computers – war gaming has replaced the real thing. You're a trainee simulation technician and have been set loose on the latest Air Support Battle Simulator. This month's Cover Disk demo features three

new training missions and the chance to prove yourself worthy. *Air Support* is a complex game with oodles of strategy and flight simulation controls and we just haven't got the space to go into everything here – the full game comes with a 68 page manual.

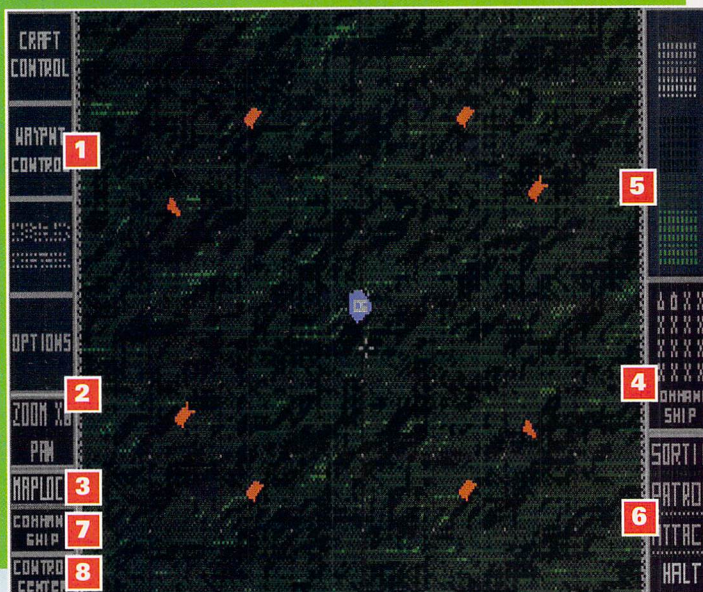
Open up the AIR_SUPP folder and run AIT-SUPP.PRG. Press the mouse button to get past the title screen. Now use the mouse to enter your name – remember what you use because it

THE MAIN EVENT

The main screen is the map of the battle area. From here you make all your tactical decisions, position your vehicles and play general

- 1 You can turn off your vehicle and waypoint display when you're in the lowest level of zoom.
- 2 This takes you to the various options for the main display and enables you to experiment with the game settings. Selecting Opt 2 takes you to a second set of options.
- 3 Deselect Maplock and click on the map to scroll your field of view around. If you want to zoom in, use the left and right buttons on the number next to the Zoom box. Select Maplock again if you want to return to the fixed view of the battlefield.
- 4 Your collection of vehicles. In the first mission you have one fighter, one tank and a command ship.

- 5 Information panel. Shows the current state of your vehicles when you click on them.
- 6 Commands you can assign to your mechanical monsters: **SORTIE**: follow waypoints and attack enemy craft when in range. **PATROL**: follow waypoint list. **ATTACK**: attack specified craft when in range. **HALT**: you guessed it.
- 7 Click here to control your command ship.
- 8 Takes you to the control centre, where you can see how your units are doing and take over manual control.



READ THIS FIRST

Tread carefully

To keep your *STF* Cover Disk safe, write-protect it by moving the black tab so you can see through the hole. Nothing can now be written to your Disk. Write-protection also keeps your Disk safe from viruses.

Study the map

Space on Cover Disk pages is limited, so you may find text files on the Disk. These have the file extension

.DOC. It's always a good idea to read these for more information on the program. Double-click on them and select Show to display the text. If text disappears off the screen when you try to read a DOC file in low res, change to medium res and try again.

Avoid the pitfalls

To keep your *ST FORMAT* Cover Disk safe you should make a backup, so if anything goes wrong you still have

the original. Because we use a special disk format to squeeze programs on to the Disk, you can't do a direct disk to disk copy. But we've made life easy for you with this *Back-up* program. Follow the instructions on page 29 and you can't go wrong. Now there's no need to risk damaging or losing your disk again!

Some programs are compressed to fit on the Disk and cannot be run directly from it. Follow the instruc-

tions in these Cover Disk pages and everything is sure to come up roses.

Close, but no cigar

We use a double-sided disk format. If you only own a single-sided drive you can't read *STF* Cover Disks, or any current software. This is because single-sided drives are obsolete. We brought you a guide to fitting internal drives in *STF32* - turn to page 58 to order a copy if you missed it.

STOS Listings

BY: BILLY ALLAN

RESOLUTION: LOW ONLY

FOLDER: STOSLIST

FILES: EXAM_1.BAS, EXAM_1A.BAS, EXAM_2.BAS, STSP.MBK

GET STARTED WITH: SEE BELOW

STOS Basic has some groovy commands for shifting sprites around, but they never seem fast enough, do they? On the Cover Disk are some listings that show a fair turn of speed, ready for you to gawp at and fiddle with. You need *STOS Basic*, of course and, by good fortune, the latest version was given away on the front of *STF 38*. Just load in the BAS files and run them, then take a butcher's at page 60 for more information from our resident *STOS* expert.

forms part of your ID number should you become successful. Click on Enter when you're done. Select the difficulty level and you're registered, then click on Menu and up pops your mission briefing. Press the mouse again and you get to the main menu. Select Start Simulation to jump right in or Data Base to take a look at the participants.

You can order your vehicles - coloured blue - to attack the enemy - coloured red - by selecting one of their units with the right mouse button. You then select one of your chaps to make the attack, either by clicking on the map or from your vehicle list on the right of the screen. Alternatively and much better tactically, is to use waypoints to control your chaps' paths. Use the right mouse button to place the first waypoint,

GIF2RAW

BY: P HANNINGTON

RESOLUTION: ALL RESOLUTIONS

FOLDER: GIF2RAW

FILES: GIF2RAW.DOC, GIF2RAW.PRG, GIF2RAW.RSC

READ: GIF2RAW.DOC

GET STARTED WITH: GIF2RAW.PRG

You want stunning graphics with a mass of lovely colour? No problem. On Cover Disk 37 we gave you the seriously flash *Photochrome* which displays pictures with up to 19,200 colours - turn to page 58 to order your copy if you missed it. However, *Photochrome* can't handle GIF format images - common on bulletin boards and designed to be transportable between machines - although it can display 24-bit RAW format pic-

tures. *GIF2RAW* takes GIF format pictures and converts them into RAW files. If the GIF file is larger than 320 x 200 then the picture is halved in size. Put your GIF file on a disk with plenty of free space - RAW files are huge - then run *GIF2RAW*. Use the file selector to select your GIF file and the destination of the RAW file. You can now load the blighter into *Photochrome* for a look at all its multicoloured glory.

Colours, colours, colours, colours - to be repeated 256 times. *GIF to RAW* enables you to raid the lucrative veins of GIF pic, then gawp at them.



then wiggle the mouse around and use the left mouse button to place a further waypoint. Now select the unit and its orders from the panel on the right. To delete a waypoint click on it with the left mouse button alone. Waypoints are used to define your vehicle's path, because it travels along the dotted line which connects them.

Pressing <P> pauses the action while the first three Function keys select the amount of ground detail in the craft control sections. Pressing <F4> and <F5> switches the game to 3D mode which looks completely crazy, but it makes sense if you wear some blue and red 3D specs. There's a great deal of depth to the control systems, so click around and experiment. Don't forget to write down your ID number when you complete a mission. Good luck.

STOS Fix

BY: M J HORWELL

FOLDER: STOS_FIX

FILES: README.DOC, BASICMJH.PRG

READ: README.DOC

GET STARTED WITH: SEE BELOW

STOS is such a marvellous BASIC language we stuck it to the front of *STF 37*. It has a mass of powerful commands which put you in the driving seat of your ST, no problem. Well, actually, there is one problem - the dreaded compatibility blues.

STOS uses a rather funny way of checking the mouse and that sort of stuff, so it has to be updated each time the operating system changes. The latest version is *STOS 2.6* and runs on everything up to TOS 1.62. Although this is unlikely to present a problem for the majority of ST users, if you're one of the lucky devils with a TT or Mega STE there's quite a high chance that you could experience some difficulties. Now, at last, some incredibly clever chap - MJ Horwell, in fact - has come to your rescue.

Inside the *STOS_FIX* folder is a new version of the *STOS* loader that runs on all of the ST family. Just replace the file *BASIC206.PRG* with *BASICMJH.PRG* on the working copy of the language disk and everything should behave. Fixing the compiler is a bit more tricky, but it's being worked on. *STOS* finally gets completely compatible.

FLIGHTS OF FANCY

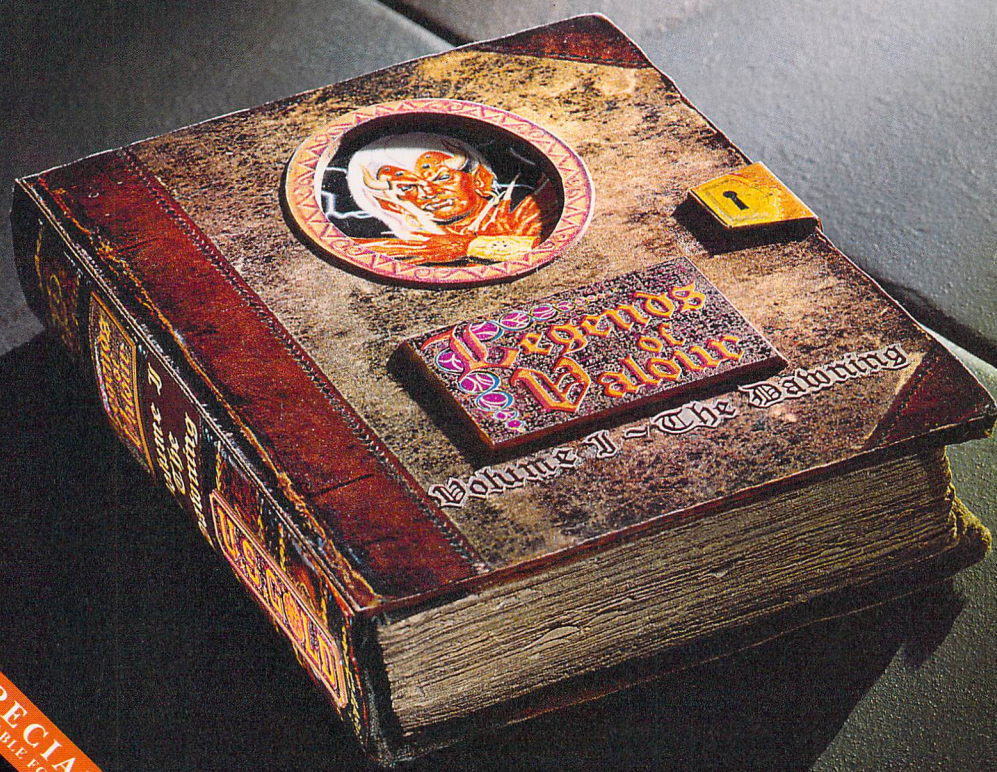
The control centre where you can flip between all your vehicles

Initially you are at the controls of the highlighted vehicle. Press the left mouse button over the forward view to take manual control. Click the right mouse button to fire. Using the left mouse button and move forward speeds you up, while move backward slows you down. Click on left and right to in order to move - er, left and right. To return to automatic control, hold the left mouse button down and click the right button. If you prefer you can use joystick or the cursor, <+> and <-> keys instead. Press <Esc> to return to the map menu.



The centre of the Universe. Well, Air Support.

THINK OF IT AS A WAY OF LIFE



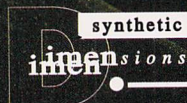
(OR DEATH)

JOURNALISTS see new titles every week, each one claiming to be the best of its kind, to date. Yet at the recent European Computer Trade Show it was the journalists themselves that could be found singing the praises of one new title in particular - LEGENDS OF VALOUR.

KEVIN BULMER (The Designer of Corporation) and IAN DOWNEND the creators of LEGENDS OF VALOUR, were literally jostled off their feet as writers, retailers and fellow programmers sought to experience what one prominent industry figure called "A game that's more away of life-utterly extraordinary."

Demo disks can only scratch the surface, screenshots in magazines could never do the astounding graphics justice (that's why you'll see none here). The only way to really find out what all the fuss is about is to experience it for yourself. LEGENDS OF VALOUR - The Dawning will be available on Amiga, ST and PC very soon.

Ask your retailer for more details or send a S.A.E. to Danielle Woodyatt at the address below for an information pack.



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Hyperbase

BY: DAVID CAWTHRAY

RESOLUTION: MEDIUM ONLY

FOLDER: HYPEBASE

FILES: BASCODE.EXE, HYPER.PRG, HYPER-RUN.DOC, HYPERRUN.PRG, README.DOC AND DEMO FOLDER

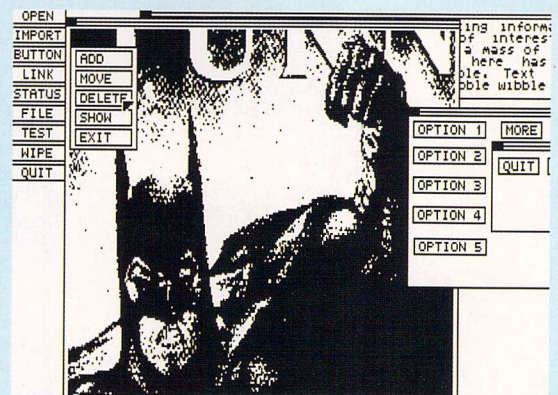
READ: HYPERRUN.DOC, README.DOC

GET STARTED WITH: HYPER.PRG

Multi-media has to be one of today's buzzwords. Not to be outdone, this month's Cover Disk enables you to get your own multi-media

presentations rolling in the aisles. You can create a series of windows, each holding text, graphics or sounds and link them together using buttons to form an interactive database – ideal for creating informative tutorials. *HyperBase* is Shareware and for a £10 registration fee you get updates, clip art and other goodies, as well as a full printed manual – further details can be found in the README.DOC file. You've read the multi-media hype, now join in.

■ A *HyperBase* system in all its glory – a set of windows and buttons forming an interactive experience.



HYPERSPACE CONTROL

HyperBase uses a very simple series of buttons to control everything. Before you start creating your HyperBase system, it's best to plan out your database on paper, then assemble your text, samples and graphics on disk

1 OPEN: either creates a new window for you to import data into, or it opens an existing window ready to edit. Windows can be moved by clicking on the bar at the top with the left mouse button and dragging them around. Do the same trick on the bottom right corner to re-size them. Click on the black box at the top left to close a window when you've finished with it. Up to nine windows can be open at once and, space permitting, you can hold up to 100 in memory.

2 IMPORT: each window can hold text, a picture or a sampled sound. Text needs to be in ASCII format – *Protext* has a Save As ASCII option – with carriage returns at the end of paragraphs. Graphics need to be in *Degas Elite* PL2 format or bit-mapped IMG files. When you import an image into a window, a set of crosshairs appear so you can choose where to place your picture. You are then asked if you want the blank areas around the image clipped. Samples must be

in *STOS* or *Mastersound* format – once loaded into a window you can click on a sample to set the speed and listen to it. The samples provided with *Sound Lab* are perfect.

3 BUTTONS: Here you can create, delete, show and move buttons to link your multi-media windows together. Click on Add to start – you can now create visible or invisible buttons which are each given a name. To centre a visible button you've placed in a window, press the <Control> key. Invisible buttons can be selected using the crosshairs which show their location. If you lose track of an invisible button, select Show and click on the window where it was placed.

4 LINK: The all-important part. Each window appears as a little box which can be moved about. To link windows together, select one of them and hold down the right mouse button, this brings up a box. Select Link with the left mouse button. Keep the mouse button held down and the box disappears. You now have a link-line which you can move over to the next window you want to link. Release the left mouse button. This links windows directly, so they open at the same time. Each button within a window can also be linked. Select the button and choose the window you want to link it to in the same way as before. Next to the button name

there's the number of the window it's currently linked to and a box containing one of three commands – NO does nothing but open specified window, CL clears the screen before opening the window and QU quits the system. The first window is always opened when you start up a *HyperBase* system.

5 STATUS: gives you the low-down on how many windows and buttons there are, and how much memory you have.

6 FILE: enables you to load and save *HyperBase* systems. When saving you are asked to give a file a seven letter name. Each window is then saved as a separate file with an eighth letter – T, S or G – for text, sound or graphics.

7 TEST: tests the system. Press <Esc> to get back again.

8 WIPE: zaps all the windows in memory. There's no Undo, so be careful.

9 QUIT: turns your nearest relative into cream cheese. Again there's no Undo command.



Assembly Listing

BY: TONY WAGSTAFF

RESOLUTION: ALL RESOLUTIONS

FOLDER: ASSEMBLE

FILES: HIDE.IT.IS, PASSWORD.IS, SHOW.IT.IS, READ_ME.DOC

READ: READ_ME.DOC

GET STARTED WITH: SEE BELOW

In answer to a plea from from an assembly coding reader comes *Password* in all its source-code glory. It protect your personal files – the contents of your diary, private letters or whatever – from prying eyes. Full instructions on how to get the thing rolling are in the text file README.DOC on the disk. Of course, you need an assembler package to run it. Luckily, we gave *GFA Assembler* away on Cover Disk 35 – turn to page 58 to order your copy if you missed it.

GFA Spec

BY: THE PHANTOM

RESOLUTION: LOW ONLY

FOLDER: GFASPEC

FILES: 512_GFA.DAT, SHOWSPEC.GFA

GET STARTED WITH: SEE BELOW

First we brought you *GFA Basic* on Cover Disk 35 and then *Spectrum 512* with STF 38 – turn to page 58 to order your copies if you missed them. Now you have access to one of the best

BASIC languages going and a paint package capable of using a full 512 colours at once. *GFA Spec* is a whizzo bit of code that brings the two together. Take your favourite *Spectrum* picture and rename it SPECCY.SPU and pop it on a disk along with 512_GFA.DAT. Now load up *GFA Basic* and load in the listing SHOWSPEC.GFA and run it. First it loads in the DAT file – which contains all the special routines for displaying a 512 colour picture – then it loads in the picture. Take a look at the code yourself, it's easy enough to modify. 512 colour screens in BASIC programs – easy life.

PROBLEMS?

My Disk is duff!

ST FORMAT duplicate thousands of disks every month and inevitably a few go a bit wonky. If you can't load any programs or open a window at all, you may be unlucky enough to have a defective disk. Don't worry – we guarantee a free replacement. Send the

disk in a sturdy envelope along with a brief note highlighting the problem and a self-addressed envelope (we pay the return postage) to:

ST FORMAT December Disk Returns,
DisCopy Labs, Unit A, West

March, London Road, Daventry,
Northants NN11 4SA.

I can't work a program out

Everything loads OK, but there is still a problem with one of the programs. You've read the Cover Disk pages and all the on-disk documentation and yet you still can't figure it out. Give us a ring on ☎ 0225 442244 and we'll do our best to help.



"LETHAL WEAPON", CHARACTERS, NAMES
AND ALL RELATED INDICIA ARE TRADEMARKS
OF WARNER BROS. INC. © 1992

OCEAN SOFTWARE LIMITED . 2 CASTLE STREET . CASTLEFIELD . MANCHESTER . M3 4LZ
TELEPHONE: 061 832 6633 . FAX: 061 834 0650

Sound Lab

BY: DAMIEN M JONES
RESOLUTION: MEDIUM
FOLDER: SOUNDLAB
FILES: SOUNDLAB.TOS, READ_ME.DOC,
SOUNDLAB.RRS AND FIVE EXAMPLE .SAM
FILES
READ: READ_ME.DOC
GET STARTED WITH: SOUNDLAB.TOS

Although samples are the business when it comes to the sound department, often they're not quite right – a touch too quiet, too long or with an annoying click in the middle – and you need a good sample editor to sort them out. *Sound Lab* is just that, with features springing from every icon – it's an ideal program for sorting your samples from *HyperBase*. Open the SOUNDLAB folder and run SOUNDLAB.TOS. Press a key to get past the flashy title screen. Click on Load and a custom file selector

appears. On the Disk are six samples for you to start with. Select one and click on OK. The main display now shows the waveform of the sample ready to edit. Click on Play to hear what you've got. You can now enter the edit zone. Don't panic if you muck a sound up, you can always load it again. There are options for several sampling cartridges, if you have one – it may work or it may not. The main purpose of *Sound Lab* is for you to mess with samples, fine-tuning them for your own programs. Turn up the volume!

SOUNDS GOOD TO ME

Sound Lab's main screen. This program is Shareware, if you use it and fancy supporting the author send the man his money. In return you get a printed manual and free updates. Some of the options are disabled on this version, most notably the block copying, but the rest is all there, including impressive fade and volume controls.

1 Move the mouse here to get at the menus. From here you can delete files. There's also a message from the author with his address. Most of the functions are disabled in the Shareware version.

2 Total amount of memory available for samples.

3 The main window. The samples waveform appears here. Click with the left and right mouse buttons to select the block of sample to operate on.

4 The name of the sample along with the full file path.

5 Current sample frequency.

6 This indicates the size of the current block. Initially, this equals the total size of the loaded sample.

7 Slider to move about the sample once you've zoomed in. Click on the arrows or use the white bar.

8 **PLAY:** Plays the loaded sample, if you have a block selected it only plays the section in highlighted in black.

9 **MONITOR:** enables you to listen to the input coming into a sampler cartridge, if one's connected.

10 **RECORD:** enables you to record from a sampler cartridge, if one's connected.

11 **SPEED:** up pops a box which enables you to set the frequency rate between five and 30KHz. Use the buttons, drag the slider or enter the desired speed directly using the keyboard. Play enables you to preview the effect. Click on OK when you're done.

12 **ZOOM IN:** zooms in on the sample, you can then move around using the slider below the main window. Invaluable for fine editing.

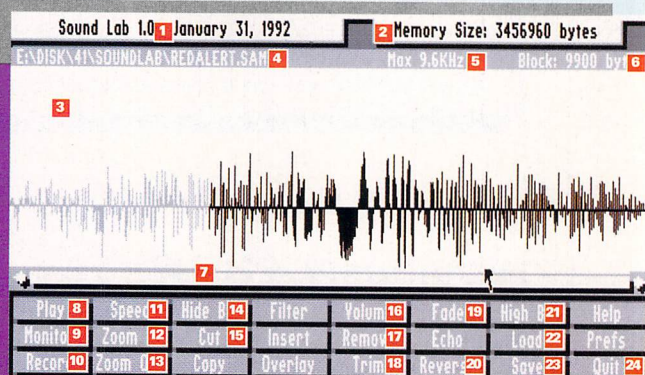
13 **ZOOM OUT:** zoom out from the sample again after zooming in.

14 **HIDE BLK:** once you've defined a block this hides it temporarily so you can hear or edit the whole sample. Click on it again to get your block back.

15 **CUT:** destroys your block, use with care. The section that gets zapped appears in black.

16 **VOLUME:** a box appears with the current block. Use the slider to set the new volume level, you can preview the effect. You can enter the value directly with the keyboard.

17 **REMOVE:** this removes the current block highlighted in black.



18 **TRIM:** trims the sample around the current block, causing everything blue to be deleted. Don't confuse with remove.

19 **FADE:** up pops a Fade window to show the block. You can fade in and out and adjust the maximum and minimum volume levels with the sliders or typing in the values directly. Click on OK when you've finished.

20 **REVERSE:** reverses the direction of the current block. Useful for picking out satanic messages in heavy rock.

21 **HIGH BIT:** converts between different sample formats. Useful for importing samples designed for different machines.

22 **LOAD:** *Sound Lab* has a swish file selector, just click on the one you want and select OK. At the top right are buttons to change drive, re-read directories, select file masks and exit folders.

23 **SAVE:** a sort of reverse load, really. Type in a new name for your sample otherwise you lose the original.

23 **QUIT:** sends you back to the Desktop. Remember to Save first.

Back-Up

BY: BRIAN TILLEY
RESOLUTION: ALL RESOLUTIONS
FOLDER: BACK_UP
FILES: BACK_UP.TOS
GET STARTED WITH: BACK_UP.TOS

There's nothing more frustrating than accidentally deleting a file you didn't mean to or treading on your Cover Disk and ruining it. OK, there are probably more frustrating things, but it's a definite bummer. Still no worries, because you backed-up the disk with this neat little backup utility didn't you? Of course you did. Before you do anything write-protect your Cover Disk –

move the little black tab so you can see through the hole. Now nothing can be deleted or written to the disk. Now get a new disk ready and run *Back-up*. From the menu press <1> and swap disks when prompted. In a twinkling of an eye you have a fresh new copy of your Cover Disk. The source disk is the disk you are making the copy of – that's the Cover Disk. The destination disk is the intended backup disk. If you have two drives then drive A is used as the source and drive B as the destination.

Back-up can also be used to back up other disks. Press <2> to see if it's possible. You can't get past the copy-protection on commercial disks, it's illegal anyway, but almost all other disks can be copied. You can relax now, you're prepared.

Mandala

BY: OLIVER J BROADWAY
RESOLUTION: HIGH ONLY
FOLDER: MANDALA
FILES: MANDALA.DOC, MANDALA.TOS
READ: MANDALA.DOC
GET STARTED WITH: MANDALA.TOS

Mandala is a frivolous piece of work that displays a changing pattern which er, you can sit and watch, but it only runs on high res monitors. Run MANDAL.TOS, sit back and enjoy. When you're mellow press the Spacebar to return to earth, mentally centred and ready to face the rigours of the modern world.

Protext is Unbeatable Value!

Protext 5.5

*"If you need a professional word processor
Protext is perfect"* AMIGA COMPUTING

Amiga Format and ST Format Gold Awards

1Mb required (Amiga or ST). Free demo disk available.
Upgrade from any earlier version on same computer just £40.

previously £152.75

now just £80

previously £99.88

now just £40

Prodata

"... reliable, easy to use and excellent value"
AMIGA COMPUTING

Database manager. 1Mb required (Amiga or ST).

Exfile

The magazine for Protext users. Packed with information to help you make the most of Protext including mail merge and macros, printing solutions and tutorials.

6 Issues for £15

Announcing Lapcat ...

a new easy-to-use transfer solution for sending files between different types of computer.

Lapcat was designed for the NC100, Amstrad's new Notepad Computer. To make file transfer easy something new was needed; the difficulties in sending files via the serial port are well known - the problems of different connectors, different types of leads, baud rates and the software at the other end. **Lapcat** is a combined software/hardware package that transfers files quickly via the parallel port.

The **Lapcat** software is built into the Amstrad NC100. The standard package consists of the **Lapcat** lead plus software on disk for the computer of your choice. This will enable you to transfer files between an NC100 and your chosen computer. **Lapcat** is not just for NC100 owners because you can buy software to transfer between any two of the supported computers. No technical knowledge is needed.

Lapcat prices: (Please state clearly the type of computer you are using - PC, Atari, Amiga).

With software for one computer **£40**

Software for extra computers **£10** EACH





PROTEXT V4.3

Christmas is coming and the goose is getting fat! **ST FORMAT's** giving away an amazing package so you can process text in a VDU kind of way. **Prototext v4.3** is here in most of its glory. **Clive Parker** shows you what you can do with it

This month we bring you the absolutely brilliant *Prototext 4.3*, probably the most popular word processor ever released for the ST. We have managed to secure the last-but-one version of the program from Arnor, which is complete apart from the dictionary files which unfortunately we couldn't include because we didn't have enough room. The dictionary disk, along with the full manual, can be ordered using the special coupon on page 33.

Modes

Prototext has two main modes, Edit mode and Command mode. We concentrate on Edit mode here because it is used for text creation which is the main use for the program. Command mode deals mainly with file and printing options which can be a bit complex to the beginner if you're using a Command line – it is much easier to use the menus or keyboard shortcuts. If you wish to use Command mode, then pressing the <Esc> key opens the Command window at the bottom of the screen.

General functions

You can select all the menus from the menu bar along the bottom of the screen, you call it by

BACK UP NOW!

You there – yes, you at the back! What have we told you before about using your Cover Disk to work from, eh? What if your dog eats it and you haven't got a back-up copy? You're in trouble then, aren't you?

On the main Cover Disk is a wonderful little program called **BACK_UP.TOS**, full instructions on how to use the program are in the main Cover

Disk pages. Follow these instructions and make a back-up copy of your *Prototext v4.3* disk, then make another copy just to be on the safe side. Once you have made the back-ups you can use one as a work disk and put the original disk in the safe. You know it makes sense. Now print out 100 times "I must always make a back-up of my *ST FORMAT* Cover Disks."

pressing the right mouse button or pressing <F3>. Items in menus which are faint (greyed out) cannot be selected. If an item has a tick next to it that means it is selected. The » symbol next to an item indicates there is a sub-menu.

Moving the mouse pointer over an item in the menu bar makes the menu drop down – click on an option to select it. To exit a menu without selecting anything, click outside the menu. Some menu items cause a dialog box to appear, these boxes contain various options that you can select or deselect by clicking on them. Pressing the <Esc> key leaves a dialog box without any actions being taken, if you are entering a text string in a dialog box, you need to press

<Esc> twice to exit. The options in a dialog box may consist of any of the following:

Text boxes: text strings are entered. Enter by pressing <Return> or clicking on another option. Option Button: select or deselect an option.

Linked Options: when this is selected, it deselects other options.

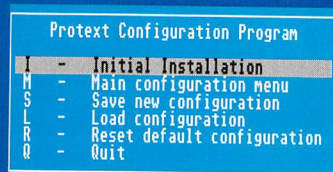
Command Button 1: Cancel: abandons current option with no action being taken.

Command Button 2: Confirm or Go: proceeds with operation then exits dialog box.

Prototext has its own built-in file selector which lists the files that are in the current directory on-screen. The cursor is moved over the files and you click or press <Return> to select

INSTALLING PROTEXT TO DISK

A configuration program, **CONFIG.PR**, is supplied so you can set up the program to suit your system.

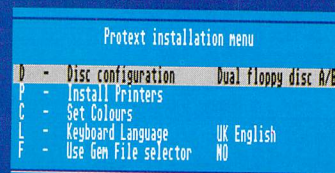


■ All the options in **CONFIG.PR** appear in large friendly boxes with menu options picked by moving a highlighted bar up and down over the various choices. An information line just above the bottom of the screen provides information about the current option, while the bar at the bottom of the screen displays the control keys.

Using **CONFIG.PR** you can define all aspects of the program's operation, from the default disk drive to the colours used by the program.

Insert your backup disk into Drive A and run **CONFIG.PR**. After a few seconds a menu box appears. The up and down cursor keys move a selector bar up and down through the options. The left and right cursor keys can scroll through the various options on a selected line; pressing <Return> selects the highlighted option. Pressing <Esc> exits from the menus.

FLOPPY DRIVE SYSTEMS: Select Initial Installation and press <Return>. Use the left and right cursor keys until the option that matches your setup appears, either Single floppy disk A or Dual floppy disk A/B. Now



■ The first line shows the current disk configuration; moving down the list enables you to set up printers, screen colours, preferred language and the file selector.

move down to the printer selection area, select Parallel or Serial depending on your printer type, then move into the printer list. There are 109 parallel printer drivers supplied, so your particular printer should be represented. After you have set up your preferred options, go back to the

first menu page and select **Save Configuration**. It is a good idea to set the **GEM** file selector on at this point.

HARD DRIVE SYSTEMS: Copy all the *Prototext* files to a folder named *Prototext* on one of your hard drive partitions. Now run the **CONFIG.PR** and select Initial Installation in the same way as in the floppy drive setup. The program automatically searches for hard drive partitions, so simply select the correct drive. Set up your other desired options and then save them.

After saving your setup *Prototext* automatically loads in the correct configuration every time you use it.



ST Repairs

Our Service department can repair ST's in minimum time at competitive rates. We can arrange for courier pickup and return delivery of your machine to ensure it's safety. We even have a same day service which will ensure your machine is given priority and subject to fault, completed the same day. We can fit memory upgrades, PC Emulators, Security devices, ROM upgrades, hard drives to Mega STE's etc.

We offer a Quotation service for £15 for which we will examine your machine and report back with an exact price for repair. If you do not wish to go ahead with the repairs then just pay the £15. However if you do go ahead then the charge is included in the minimum charge. Please note: The minimum charge covers labour, parts are extra.

Quotation	£ 15
Min repair charge	£ 35.25
Courier Pickup	£ 11
Courier return	£ 6
Same day service	£ 15
STFM(E) PSU	£ 39.99
1Mb Internal drive	£ 39.99
A/B Boot switch	£ 4.99

Printers

Star SJ48 Bubblejet	£210
Star LC-20 dot matrix	£124
Star LC-100 colour dot matrix	£165
Star LC-24/100 dot matrix	£179
Star LC-24/200 dot matrix	£209
Star LC-24/200 colour d/m	£259

All Star dot matrix printers include 12 months on site warranty. Add £3 for Centronics cable.

STE Packs

520STE	£219
1Mb 520STE	£229
2Mb 520STE	£264
4Mb 520STE	£310
New-8833MKII colour monitor with Lotus challenge 2	£189.99
Cable for ST/STE please specify	£9.99

DataPulse Plus

The Data-Pulse range has recently been re-designed. The Data-Pulse Plus range now offers a more compact case that cuts down on noise even more, all ports are marked, an extensive range of software utilities are now included and our range of special offer utilities has been expanded confirming our commitment to future support. We are continually improving the quality and price/performance ratio of our drives. We have recently incorporated the MAXTOR hard drive mechanisms which offer low power, cached 11ms access time, 127Mb formatted capacity, 150,000 Power on hours mean time between failures and all for a lower price than our old 105Mb drives.

- ✓ All drives are formatted/partitioned and tested ready to "plug in and go".
- ✓ Extremely low noise.
- ✓ Fully Autobooting and Autoparking.
- ✓ DMA device selector & On/Off switch on front of case.
- ✓ DMA Out port for daisy chaining extra drives/Laser printer.
- ✓ Full metal case measuring 300mm x 285mm x 51mm (wdh), providing good shielding and monitor stand.

- ✓ High quality ICD boards including on board clock and controller software.
 - ✓ All drives include Vault archiver, Backup software, Virus killer, MCP shell program, Midstudio Master demo.
- | | |
|---------------------------|----------|
| Data-Pulse Plus 40Mb ICD | £ 289.99 |
| Data-Pulse Plus 52Mb ICD | £ 319.99 |
| Data-Pulse Plus 80Mb ICD | £ 379.99 |
| Data-Pulse Plus 127Mb ICD | £ 429.99 |
| Data-Pulse Plus 213Mb ICD | £ 539.99 |
| HD Turbokit | £ 4.99 |

DataPulse 2 20 Mb Floptical

The New Data-Pulse Plus Floptical drive, is a 35" SCSI mechanism, ICD host adaptor, high quality Data-Pulse Plus case and psu. The drive is capable of storing over 20Mb of data on a single 35" Floptical disk and can also read/write 720K and 144Mb 35" floppy disks. The average access time is just 65ms and the data transfer rate is 200K per second, 6 times faster than floppy disks. The Floptical is available as a stand alone unit, an upgrade to existing Data-Pulse(Plus) users and as a built in addition to Data-Pulse Plus hard drives where it would be ideal for fast data backup, drive.

20Mb Floptical	£439.99
20Mb Floptical disk	£24.99
Floptical Upgrade to Data-Pulse (Plus) HD	£319.99
Diamond Back II	£29.99

New Unlimited Storage capacity

Aries Upgrades

The Aries Upgrade board is an in house designed, Multi layer board utilising high density ZIPP RAM chips. The board has been designed to allow progressive upgrading from the base 512K up to 4Mb. The board does require some soldering but once installed is very reliable. The board is hand assembled in our workshops by skilled technicians and is fully tested before despatch. It also comes complete with fitting instructions and test software. Our technicians can fit the board to any ST for a small fitting charge. We can arrange courier pickup and return to ensure fast turn around. A same day fitting service is also available. Please phone for further details of courier and same day service.

Aries Upgrades (any ST(FX(M))

512K Aries board	£ 39.99
2Mb Aries board	£ 79.99*
4Mb Aries board	£ 129.99*
Courier pickup	£ 11
Courier return	£ 6
Fitting charge	£ 15
Same day charge	£ 15

Please check the configuration of your machine before ordering.

* = Special offer

Data-Net

Data-Net is a high speed network solution developed in house at Ladbroke Computing for the ST/STE. Ladbroke Data-Net hardware consists of an unobtrusive cartridge which plugs into the cartridge port of your ST/STE and connects via Coaxial cable and BNC connectors. The Data-Net hardware is fully Lantech compatible and can be used with Universal Network software. The Universal Network software is a Multi tasking network package which does not tie up the server whilst drive or printer accesses take place. It allows the sharing of Hard drives and Centronics printers anywhere on the Network. Nodes can also Auto boot accessories from a host's hard drive.

NEW PRICE

Data-Net Node Consisting of 1
Datatnet hardware node + 1 Universal
Network Node software only
£99.99

Silhouette

Silhouette is a bit image and vector graphics drawing program with Auto tracing. The package offers Auto-Tracing, Beziers, B-Splines, High resolution gray scales. Supports FSM-GDOS, requires 1Mb ST or TT High resolution. Imports: IMG, DEGAS, TINY, MacPaint, GEM, SGF Exports: IMG, GEM(13), SGF, DXF, EPS(Postscript).

Only £60

Aries SIMM's

Special Offers

512K SIMM Upgrade for STE	£7.99
2Mb SIMM Upgrade for STE	£47.99
4Mb SIMM Upgrade STE	£92.99

Please check configuration before ordering

The New Falcon 030 £479.99

1Mb RAM, 16MHz 32 bit 68030 processor, 32MHz 56001 Digital Signal Processor, 8 channel 16 bit CD quality DMA sound chip, Microphone input for stereo sound digitising, 65536 colours in 320x200 mode, 256 colours in VGA mode. SCSI II bus, Internal IDE hard drive interface, Multi TOS Multitasking operating system. Phone for VGA monitors, IDE hard drives, SCSI hard drives etc.

GI Hand Scanner £119.99

The Golden Image Hand Scanner for the Atari ST features a 105mm scanning head, variable contrast control user selectable scanning resolutions of 100, 200, 300 and 400 Dpi, one letter mode for high contrast B/W images and 3 photo modes for various shades of grey. The high quality hardware is backed up by two of the most respected graphics packages around. Migraph's Touch Up for scanning and editing hi-res and grey scale images and Deluxe Paint art package for lower resolution colour.

- ✓ 100, 200, 300, 400 Dpi scanning resolution
- ✓ 105mm scanning head
- ✓ 1 letter mode, 3 photo modes
- ✓ Includes Touch Up
- ✓ Includes Deluxe Paint

Scanlite is an accessory which allows the scanning and saving of files whilst your favourite editor or DTP package is running. The accessory supports Golden Image, Migraph, GeniScan and DAATAscan Hand Scanners. £20

GI External drive £54.99

The Golden Image External 3.5" Floppy drive for the Atari ST features 720K formatted capacity, double sided double density, Through port compatibility for older ST/STM machines, external PSU.

- ✓ 720K Formatted capacity
- ✓ New Low price (no track counter)
- ✓ External Power Supply
- ✓ Daisy Chain Through Port

The NEW Bruse Mouse

- ✓ 150 Dpi resolution
- ✓ 500mm/SEC Tracking speed
- ✓ Switchable between ST/Amiga
- ✓ Opto/Mechanical Mechanism
- ✓ Includes Deluxe Paint ST
- ✓ Direct mouse replacement

£24.99 with D-Paint **£19.99** without D-Paint

GI Optical Mouse £24.99

The Official Golden Image Optical Mouse is a high quality, 3 button, replacement mouse. The fully optical mechanism means no moving parts and offers far higher reliability than opto/mechanical mice.

- ✓ 250Dpi, 500mm/sec tracking speed
- ✓ Fully Optical
- ✓ Mouse mat included
- ✓ Switchable ST/Amiga

GI Mouse

The Golden Image Opto/Mechanical Mouse offers 290 Dpi resolution, 2 Microswitched buttons for greater reliability and crisper, more positive response, Anti-static silicone rubber coated ball. Also includes mouse mat.

Only £14.99

Jin Mouse

Don't be deceived by the low price of this mouse. Mass production of the Jin mouse has resulted in a high quality Opto/Mechanical mouse featuring 290 Dpi resolution, 500mm/sec tracking speed, Anti-static silicone rubber coated ball.

Only £7.99

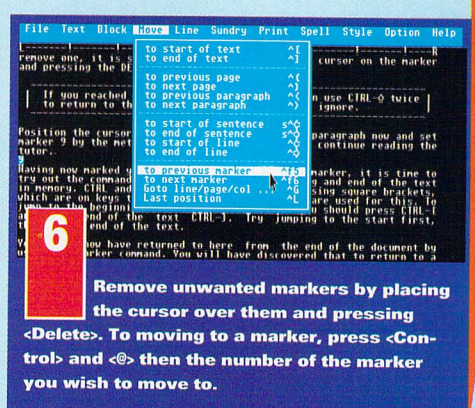
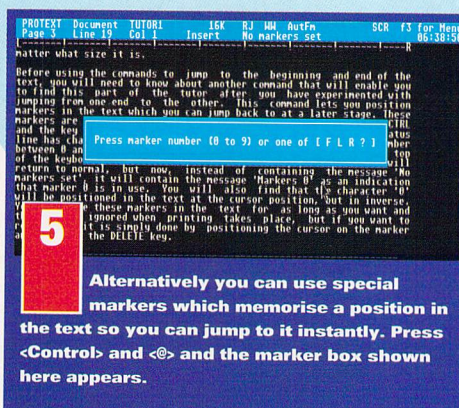
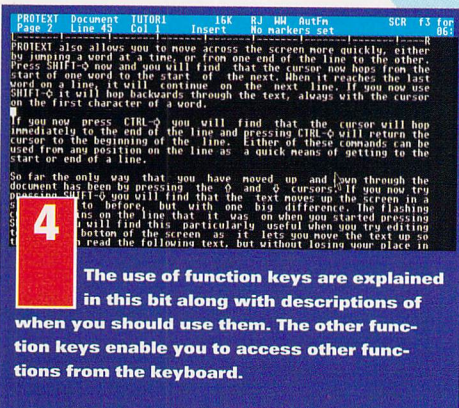
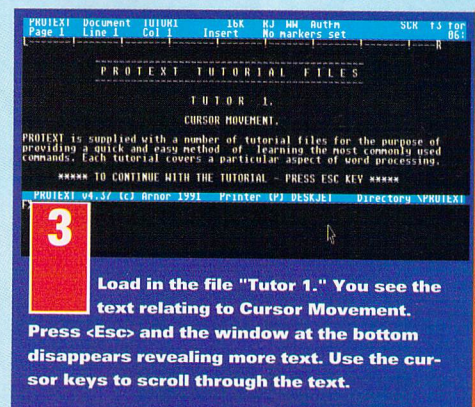
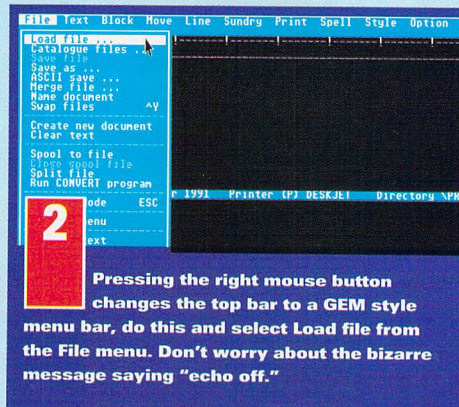
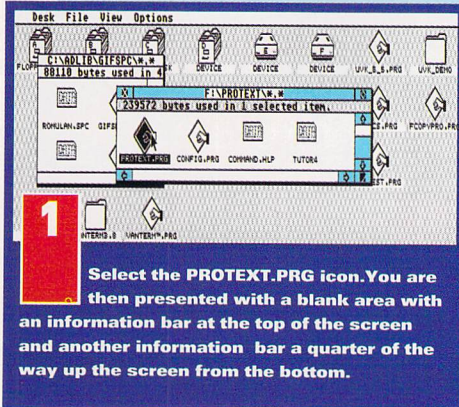
Ladbroke Computing International

Ladbroke Computing International are the longest established Atari dealer in the UK. We have developed an extensive customer service policy which involves testing of all Hardware prior to despatch to ensure that goods arrive in working order, offering free advice and support over the phone and keeping customers informed. Although our prices are not always the cheapest we do endeavour to offer consistently good service and backup. All prices correct at copy date 13/10/92 (while stocks last), and are subject to change without prior notice. All prices include VAT but exclude delivery. Add £5 for next working day courier delivery, add £10 for Saturday courier delivery (mainland UK only). Add £3 for postal delivery, only on items under £50 (check with staff before ordering). All prices available on Mail Order, Shop prices may differ. Shop/Mail order premises: 33 Ormskirk Road, Preston, Lancs, PR1 2QP Open Mon-Sat 9:30am-5:00pm. Phones answered from 9:00am. Ladbroke Computing International is a trading name of Ladbroke Computing Ltd. BFPO addresses overseas, deduct 17.5% VAT and add normal UK carriage.

Telephone (0772) 203166 FAX (0772) 561071



MAKE THE MOST OF PROTEXT... START HERE



one of them. If you find the *Protext* selector confusing, select the GEM selector when you're initially configuring the program.

Edit mode commands

All editing commands can be called by the keyboard, using <Control>, <Shift> and <Alternate> along with other keys on the keyboard. <Control> and <F> formats a piece of text and <Control> and <J> justifies a piece of text. All the Edit commands are available from the menus as well as from the keyboard and the shortcuts are written alongside the menu options. Here is a summary of the cursor movement commands:

Left Move left one character
Right Move right one character

Up Move up one line
Down Move down one line
<Shift> Left Move left one word
<Shift> Right Move right one word
<Shift> Up Scroll up one line
<Shift> Down Scroll down one line
<Control> Left Move to start of line
<Control> Right Move to end of line
<Control> Left Scroll back one screen
<Control> Right Scroll forward one screen
<Control> <[> Move to start of memory
<Control> <]> Move to end of memory
<Control> <[> <Control> <]> Move to start
<Control> <[> <Control> <]> Move to end
<Control> <[> Move back a page
<Control> <]> Move forward a page

<Control> <<> Move back a paragraph
<Control> <<> Move forward a paragraph
<Control> <L> Go to last position
<Control> <G> Go to line/page/column

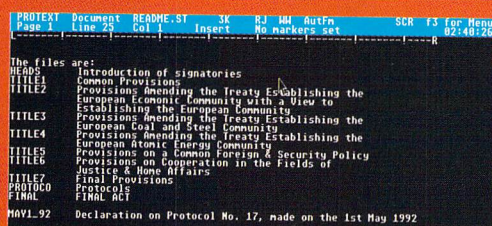
File size

The only limit to the size of files you can create and edit with *Protext* is the capacity of your disk: large files are not loaded completely into memory but are loaded in sections from hard drive or floppy disk. If you are creating a large file it is best to use a blank formatted disk because temporary and backup files are created while you're working on a document thus taking up disk space. When a file is edited and saved, the original version of the document is retained as a

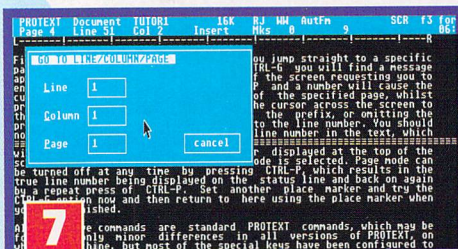
INTERESTING? YOU BET!

As a service to you we have included the full text of the Treaty on European Union, Maastricht 1992 for you to use with *Protext*, kindly supplied by David Pollard Publishing. To decompress the treaty follow this procedure. Copy the MAASTRIC folder on Cover Disk 2 to a blank formatted disk or to a hard drive partition. Open the MAASTRIC folder and double-click on the MAASTRIC.TOS file. The file now unfolds and decompresses the text files that make up the text of the treaty into ASCII text suitable for loading into *Protext*.

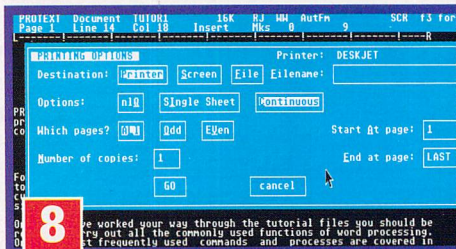
The README.ST file shows the order that the files must be loaded into for printing out. If you do not have a printer or you do not want to



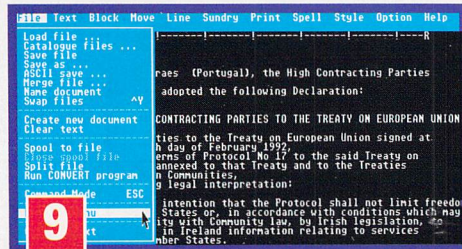
...AND GET CONFIDENT HERE



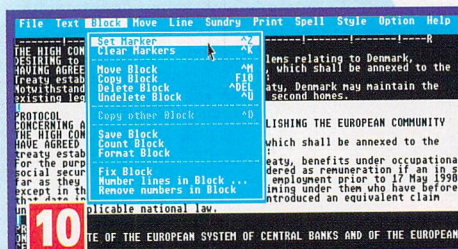
7 To go to a specific line, column and page within the text, select the **Goto** line/page/col option and enter in the position you wish to move to. Experiment until you are familiar with them.



8 Select the **Print text...** option from the **Print** menu to bring up this menu. All the normal printing options are available like number of copies, odd and even page printing, single or continuous paper and so on.



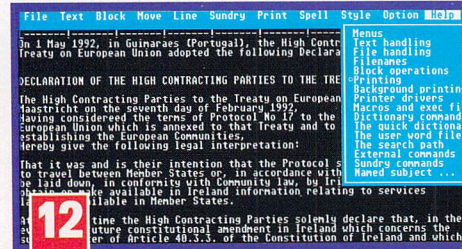
9 *Protext* has a **Desktop** menu option in the **File** menu. Clicking on this causes a **GEM** menu bar to appear from which you can call **Accessories**. All other functions are frozen until you quit from the **Desk** menu.



10 All the program options are available from the drop-down menus, and many of the functions have keyboard shortcuts assigned to them. This is one of two methods of selecting block markers.



11 *Protext's* search function has many extra features built into it. **Marked** blocks can be searched through, the search can be made in either direction through the file and spaces in text strings can be ignored.



12 Each of these help menu options covers a subject that, when selected, is displayed on the main work screen. The best way to get familiar with *Protext* is to work through the tutorials and experiment. Enjoy.

backup on the disk. This ensures you always have at least one recent version of a file if anything should, by some unpleasant misfortune, go horribly and irreparably wrong.

If the disk gets full then a warning "Disk full" message is displayed on-screen - you might have to delete some older unwanted files on the floppy disk to be able to carry on editing the file. Alternatively, you could split your large

file into a selection of smaller blocks which are easier to manage.

Remember, if there are any problems with your machine or the power supply, a large document could be completely lost. Working on files larger than the memory is slow because of constant disk accessing; anyway, small files make specific parts of a document easier to find. You usually only work on a small part of a document

at a given time, so it is quicker if the file is in sections.

Finally, don't be afraid to experiment with *Protext*, if you use a backup copy of the text files being worked on you cannot harm anything if you try out new options. Never be frightened to try something novel. Now, get those fingers flying over those keyboards and produce a masterpiece to be proud of. **stf**

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If you weren't paying attention during all those years of English classes, then your spelling's probably not much cop. Even if you're a PhD then the odds are that you still make spelling mistakes when you're composing text. It's here that a spelling checker comes in handy. It reads through your document and highlights suspicious words; it can even come up with the correct spelling for you. You can get hold of the spell checker for *Protext* by filling in the form opposite and sending £20 to Arnor at 611 Lincoln Road, Peterborough, PE1 3HA. Included for that price and on the same disk there's a plethora of printer drivers, a RAMdisk utility and a text conversion program, not to mention the chunky manual which goes into details we couldn't fit in here and doubles as an attractive paperweight. If you'd like to treat yourself to the latest version of *Protext* - v5.5 - with improved GEM support, a more comprehensive dictionary and a wider selection of printer drivers, it costs £55 and is available in the same way - just fill in the form and send the dosh!

A stylized illustration of a soccer player in mid-air, kicking a ball. The player is wearing a white long-sleeved shirt and dark shorts. The ball is a classic black and white soccer ball. The illustration is positioned to the right of the word 'at'.

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FEEDBACK



Is it all getting too much for you? Write to the Editor about it. Address your letters to The Editor, Feedback, ST FORMAT, 30 Monmouth Street, Bath, Avon BA1 2BW

Stars on someday

I am writing concerning some basic (and far too common) misconceptions in Mr Wilcox's letter which you printed in *STF* 39. There are three main points.

First, Mr Wilcox states: "Physical science is hopelessly ill-equipped to deal with joy and sorrow, love, humour... hope... compassion." This is not the first time this argument has been presented to me, and it is only right to point out that this is asking too much of physics – physics is just that, a physical science. Emotions are the domain of the social sciences which do not recognise astrology as a valid means of prediction, any more than physical sciences do.

Second, according to even the most detailed horoscope, anyone born on the same day in the same maternity hospital will have identical horoscopes during their lives. Does Mr Wilcox seriously believe that they will lead identical, or even slightly similar lives? Surely not.

Last, even resorting to physics itself, the only four forces known (and, by definition, stars can only have any effect upon us from a force or by physical contact) are the weak and strong forces (neither of which is observable above the atomic level), electromagnetic (which cannot come from a star, because the star is neutral in charge) or gravitational, which is negligible even when compared to

the force between this copy of *STF* and himself.

Ergo, either astrology relies upon an entirely new force (which is not actually "contravening a law of physics," but it would add sev-

**Astrology either
relies upon a new
force or is
fallacious**

eral new ones), or is fallacious. If the former is true, I hope that Mr Wilcox will share his Nobel prize with me.

Chris Preedy, Surrey

stf: I've heard of the force being "with" someone, but this is pretty racey stuff. Could we have stumbled on the fact that this is, indeed, a new science? I wish we'd worked this out when I was at school. I never did fancy biology, physics or chemistry, but if astrology had been a fourth option I'd have been laughing.

Classes in astrology would have been a hoot. Teachers could have said things like, "Now, if the sun is rising through the fifth house in my chart, what job will I be best at?" They could ban extremist books like Practical Physics or Biology for Beginners. What fun.

Ram heads and pentagrams

I wish to point out to people (like Julian van Eyken, *STF* 37) that the occult does not mean black magic, just as voodoo doesn't. Collins Gem says:

"Occult" a. secret, mysterious; super-natural – n. esoteric knowledge – vt. hide from view."

In other words, the occult is the unknown. Many things fall into this category including ghosts, psychic phenomenon, magic of all kinds, and divination, so the occult should not be dismissed in ignorance as evil (particularly as ignorance can be).

So many people think that the "occult" is bad because they do not know anything about it or have heard the worst. If, however, you say that satanism and black magic are bad, you would be right. On the positive side of occultism, consider Jesus – didn't he wield occult powers? Saints are also recorded as having them. Yoga is the pursuit of "union" with God and he is most definitely hidden (assuming that, of course, he/she/it does exist).

As for role playing games, only someone who has little knowledge of them could possibly consider them to be connected with the occult – this is, no doubt, down to the use of "magic" in the game systems, which is as fictional as the magic in most fiction.

It is interesting to note, however, that JRR Tolkien used runes

which have occult connections, being used in divination and magic. The Teutonic god, Odin (Woden, Wotan) is supposed to have discovered them. The word rune means almost the same as occult, mystery, or secret. Also Midgard is the home of humanity in the Teutonic tradition and is in the middle of all worlds, which equals Middle World or perhaps Middle Earth?

Another thing to note is that occultists often mention that they read "fairy tales" – that is, the older ones like those by the Brothers Grimm because they often contain ancient lore. Another thing – hop-scotch is meant to be the representation of the cabalistic tree of life which is the basis of western occultism. Note also that voodoo (from Vodun) means "creator of the universe" or God, in other words.

Tom Rees (*STF* 37) condemned astrology – admittedly astrology is a tad hard to swallow, but then don't the gravities of the sun and the moon create our tides? A certain John H Nelson discovered a connection with the planets and stormy ionospheric conditions (which hinder short wave radio reception), much as it was described by ancient astronomers. Applying the angular relationships between planets he increased correct prediction of bad weather conditions by over 30 per cent. So the planets affect the earth. This means it is likely that people

STARS OF THE FRIENDS

My grand-daughter, Ashleigh, was born prematurely and had to be put in an incubator to give her a chance in life. On our first visit to see our little wonder we noticed that there were many babies in incubators and that the Special Baby Care Unit at Basildon Hospital desperately needed another one.

The unit are asking for help and ideas to raise the sum of £20,000 to pay for this new incubator. I gave a lot of thought to this and I came up with the idea that, for a donation to the fund mentioned, I could supply the parents of new born babies with a star chart and horoscope with the aid of my ST, printer and the program *Astro 22*.

I next thought about the copyright, so I phoned the author, D K Wilkinson, who was very pleased to think that his program could be put to a charitable cause. He agreed to let me use it in such a way, only requesting that his name be put with any use of the program.

I would like to thank the *STF* team for providing us all with a good read and good quality Cover Disks. Also a very big thank you to Mr Wilkinson for letting me use his program to help raise much needed funds.

Could you use your ST for a local charity in your area? If you can, don't forget to ask the

author of any programs you might use.
TJ Gray, South Ockendon, Essex

stf: What an excellent idea, Mr Gray. The ST has been used for any number of purposes in the past, so it's great to hear about a new and highly useful one. We'd be pleased if you would donate the £100 you've won from this letter to the hospital with our best wishes.



are affected since we consist largely of water. If we fully grasped the laws of physics, then the meaning of life would perhaps be apparent.

To underline the strangeness of people's personal beliefs, read this: I know someone who believes in UFOs because he saw one (many people saw it - news of it even reached the *Nottingham Evening Post*), but he doesn't have any faith in scientists. He says: "How do we know they don't make it up?" See - just because you don't believe in something, doesn't mean it doesn't exist.

David Smith, Nottingham

stf: Strewth, I didn't realise there was so much heavy research going into the effects of gravitational pull on the human body. Does that mean that we have tides and ebbs just like the oceans? Are these what affect our moods? Of course not, our moods are affected by the enormous number of chemicals we consume so that our food stays fresh in its environment-unfriendly packaging.

Falcon hell

Does the Falcon support sprite graphics and hardware scrolling? I have seen statements from software houses who say that,

because whole sprite and screen handling routines have to be written into games, those features are high on the list of reasons why many top games are ignored on the ST.

The Falcon is whatever kind of machine you want it to be

Of course, you may say that Falcon is not supposed to be a games machine anyway, yet you can't deny that this kind of software support is what makes or breaks the sales of computers. I would like to be able to continue to support Atari products, as well as the best in MIDI and serious applications. I hate to admit it, but the answer to this question could well sway my decision as to whether to purchase the machine or wait to see what Commodore comes up with before making up my mind.

Peter D Ward, Kent

stf: Sprite graphics no, hardware scrolling yes. I can't see the logic of your point, however. Software

houses support machines on which they know they can shift software - it's as simple as that. Ultimately what makes their job easier is a quicker machine. You see, if the processor's up to the task then they can write relatively sloppy code and it still runs at suitable speeds.

The Falcon isn't a games machine or a serious machine, it's whatever kind of machine you want it to be. Falcon is a home computer, it's not a console or a number cruncher, it has been designed to fit into any home and provide an almost endless number of services. If what you want to do is play games, it can do that better than any machine on the market. If you want to create music, it can do that better than any machine on the market - and if you want to number crunch, then (with its powerful processors) it can do that better than any machine around

The simple fact is that all the major software houses have either come out in favour of the Falcon or are keeping a close eye on its progress. In this issue of STF there's a Falcon games preview (page 72), a Falcon review (page 106) and a multi-media feature (page 30). All of these show exactly what Falcon can do. And this is just the beginning.

Bad sports? Us?

I am deeply disturbed. How can you sound serious about the ST as a superior machine when you confess that you use a DTP program on a Mac to produce your magazine? The Amiga magazines don't need a Mac to produce their publications, they use a 3000 mainly because they have the right software to force their machine. You'd have to be on the moon to deny that almost all Amigas are 1MByte. The reason is very simple - expansion boards cost half the price of ST ones, like all other Amiga accessories. It's true Commodore may thank game players for the big sales, but you cannot call it a console. Be serious!

I've had a B2000 for a while, and I'm really proud of it - it has great graphics, sound, animation, real multi-tasking and is user-friendly - unlike the ST. But I have to confess I still have a desire for an ST and I'm probably going to buy one this year - should I choose an STE or a Falcon? Apologies for my poor English, I learnt it using a DataEast PC manual though I sold the PC ages ago.

Ricardo Madeira, Portugal

stf: We do produce ST FORMAT on Apple Macintosh setups, but that's because they were what our

SHADES OF GREY

I followed the insight into the new Falcon with great interest and, you are right, it wastes the Amiga. However, you are missing the point - Amigas are not the competition, PCs are. The Falcon does not really stand up against them now that virtually every large company is collaborating to bring PC prices down. PCs now have 64 sound channels and normally display 256 colours at 1024 x 768 resolution. Now Sierra chip sets push that number up to 32,768 colours - far better than the Falcon can manage. The CD compression sockets look interesting, however, but the chip speed of 16MHz is not really very good - 32 or even 50MHz would make it more appealing - especially to power users.

The PC socket would have been very good two or three years ago, but now Intel, who make the chips, are really pushing the 486. What I want to know is why companies are suddenly going mad about Windows 3, when equivalent software has been around for the ST, Amiga and Mac ever since these machines were created - and with much easier installation systems.

Adrian Bridgett, Alderley Edge, Cheshire

stf: Oh dear, how many facts can one person get wrong? I'd point you in the direction of STF 40 and the prize winning letter which proves quite easily how ridicu-

lous and unfounded your assertions are. Sierra would have to push their chip set quite a bit further in order to recreate the 262,000 colours Falcon is capable of - this is somewhat better than the really rather tame 32,768 colours your state-of-the-art PC strains to produce. You say that the PC now has 64 sound channels. We've asked a lot of people and can only find a hugely impressive (not!) seven channel sound card.

The Falcon is, in every way, superior to all but the most outrageously expensive PC

This point about sound and your other peculiar point about MHz speed sums up the whole problem with PCs and it's one which PC owners have been woffling on about for years. The MHz of a computer has absolutely nothing to do with its real speed or processing power. It is only the PC market which can create benchmarks for itself in this way and which feels the need to

keep constantly re-inventing itself with gecko-like monotony every time Intel bring a new processor out.

The Falcon is, in every single way, superior to all but the most outrageously expensive PC. Alright, so it's possible to perform some of the multi-media tasks which Falcon is capable of on a PC, but all the different cards and processor upgrades needed to perform this would cost you many thousands of pounds.

With Falcon you get 262,144 colours with full overscan, a blitter chip, stereo 16-bit digital DMA audio input and output, eight channel 16-bit DMA sampling (at up to 50kHz), a fantastically powerful digital signal processing chip, an enormously quick 32-bit CPU, all the ports and sockets you could ever dream of - and all for £450.

The sooner PC owners stop performing their own prehistoric benchmark tests on infinitely superior hardware like the Falcon, the better things will be for all of us. If I read one more letter from a sanctimonious PC owner who's regretting spending so much money on such a gloriously underperforming and utterly doomed machine, then I shall probably split open like the dog at the beginning of The Thing and devour the entire PC FORMAT team. Of course, this won't help matters at all but at least it'll help to fill the gap between meals.

bosses gave us – we didn't decide to use Mac kit, it was rudely thrust upon us by an uncaring administration. I can, however, assure you that all the Amiga magazines we publish (the admirable Amiga Format, Amiga Shopper and Amiga Power) are all created on Macs, just like ST FORMAT. For that matter, every single magazine Future publishes is created on Macintosh equipment – that's including PC magazines.

Quite why you think Amiga upgrades are cheaper than ST ones is beyond me, perhaps they're more expensive in Portugal, but I can assure you that in the UK they're exactly the same price – as are other accessories.

I'm glad you're going to buy an Atari machine, I'm sure it'll provide you with good service because it has great graphics and sound, animation and multi-tasking abilities as well as user-friendliness. Oh, and it's good to hear that you've got rid of your PC.

Portuguese pleas

Did you know that Atari's computers are virtually non-existent in Portugal? Sad but true – there are probably less than 100 STs here, most of them are owned by musicians, the rest by people who heard of the ST and had to go out searching for it. The small number of machines in this country is simply a consequence of bad information – or lack of any information at all. Hardly anyone knows of the ST or even Atari, so how can people buy a computer they have never heard of and where can they buy a computer they never see anywhere? Why are Atari ignoring Portugal, letting it be flooded with PCs and Amigas that, in my opinion, never perform as well as the ST?

Miguel Marcos, Portugal

stf: If there are so few Portuguese Atari owners, how come I get more letters from Portugal than from France? Weird. Anyway, no doubt Atari will attempt to redress the balance of computer ownership in Portugal with the release of the Falcon. If you want to complain to the man who knows better than most about the state of Atari in Portugal, write to Sam Tramiel, Atari Computer Corporation, 1,196 Borregas Avenue, Sunnyvale, CA 94089-1302, USA.

Sensible Sounds

I bought Sensible Soccer a few days ago, only to find that, despite it saying on the box "second disk full of crowd sounds" the only samples I got were samples from

the demo on ST FORMAT Cover Disk 38. I love the game, but I was puzzled by the lack of samples, so I took it back to the shop. There I was told that many ST owners have had this problem. They gave me a new copy but it still didn't include the samples.

Bennie Cook, Surrey

stf: The people at Sensible Software tell us that they didn't have the room to include some of the samples in the ST version of Sensible Soccer. They bunged as many as possible within the game, but ran out of room for the crowd chants. This is what you're missing out on – a bit of hissy background noise. What appears to have happened is that the game's distributors, Renegade, used the same box for both the ST and Amiga, failing to notice that the ST version is different. A spokesman said: "We are sorry, but it's a genuine error – that line should have been overstocked on the ST version, but it was overlooked."

The game's still a belter anyway. Oh, and while we're on the subject, some owners of shops and members of the wholesale community are telling people that the ST version of Sensible Soccer doesn't exist. This is untrue; if your local computer shop isn't stocking it, try a mail order company like Special Reserve on ☎ 0279 600204.

Look here, this is useless - get an ST like me

Stunt Car saviour

I was at my friend's house playing Stunt Car Racer on his Spectrum +2. "Look here," I remarked, "This is useless. Get an ST like me, it'll be better." The next day he ordered a 520 STE and his Spectrum now lives in a cupboard. Do I get some sort of prize or something?

Nathan Thomas, Southampton

stf: Well, you get to appear on the hallowed pages of this magazine, Nathan, is that prize enough? As to your friend's 16-bit revelation, I can

LETTER FROM ABROAD

Nice in Nice

As a French ST user since 1986 I'm always looking out for a good Atari magazine. So, as often as I can find it, I buy ST FORMAT. In issue 38 on page 77 I saw a little note about René Metge. You wrote "who is this man?" I can reveal all.

René Metge won the big African Paris-Dakar rally two or three times. At the end of the 1980s he won the first European Turbo Cup tour. This year he organised the first Paris-Moscow-Peking rally. Hello from the French Riviera.

Benoit Maynard, Nice, France

stf: Thanks for the information, Benoit – oh, and thanks, too for the "Hello," yes, thank you from an England descending into rainy, soggy, overcast and otherwise damp autumn. I do hope you're enjoying yourself in Nice where you're probably having a horrible warm autumn and winter. Bitter?

only say it has taken him rather a long time to see the light, but we're glad he's here all the same.

Farty karate

I've had my STE for nearly a year now and originally bought it because of its amazing MIDI compatibility without having to splash out extra dough on a MIDI interface. I've also been known to enjoy a good joystick bashing. I recently purchased a small compilation by System 3 entitled The Premier Collection and while Tuskar, Flimbo's Quest and The Last Ninja Remix are so-so games, the fourth is IK+ which I was led to believe to be excellent. Since the whole pack was going for just £12.99, I thought I couldn't really lose.

When I got home I loaded up the amazing IK+ only to receive a five second demo and a message saying "Bum Copy...." Naturally I was not too pleased, so I returned the package for a refund. With this I purchased IK+ on a budget label. However I'm still presented with the same horrible facts. Can you tell me if (a) is IK+ compatible with a 520 STE and (b) System 3's address – I'd like to write to them because I think this is a bit shady.

José Williamson, Harrogate

stf: I spoke to Archer Maclean who programmed IK+ and he said that the STE didn't exist when the game was created, so he can hardly be blamed for its non-functioning. The message you're getting is the same as that which a pirate would see. Archer told us he put a few flags in among the code to check the legitimacy of the program – the STE reads these incorrectly, assuming wrongly that the program is pirated. If you'd like to take this up

with System 3 who are responsible for its distribution, contact Adrian Cale, 18 Peterborough Road, Harrow, Middlesex.

Das Song

Have you heard the ST "singing" the lyrics in the song by U96? Also, is there any truth in the rumour that an ST is to take over from Philip Schofield in Joseph?

Lee Wheelhouse, Sheffield

stf: We haven't been able to confirm whether or not Pippa Schofield is to be replaced by an ST. We can, however, exclusively reveal that an ST is to become the next Heritage minister, that the pound's movements within the ERM (the what?) will, in future, be monitored by an ST and in the next series of Eldorado, Fizz is to be played by a Lynx.

Over-cooked brain cells

I am an unemployed surrealist with a very vivid imagination. When I insert a disk into my drive, the monitor turns into a large cube of semi-translucent jelly-like material of a blueish hue which wobbles slightly. At the same time there's a strange high-pitched squeaking noise not unlike the sound of a wheel that needs a drop of oil. At the same time, millions of frozen peas shoot out of the cartridge port, completely filling the room. Can you help?

John Wings, Hornsey

stf: No.

Your ten most common Falcon questions

1. Will my existing ST games software run on the Falcon?

stf: No, ST games will not run on the Falcon and were never intended to. Software companies are working on Falcon specific versions of games that will be the equivalent of top-of-the range PC titles with digital stereo sound and SVGA graphics. With these capabilities it is pointless making the machine downwardly compatible with ST titles.

2. Will my existing serious software run on the Falcon?

stf: The official Atari UK line is that much ST software such as DTP packages, word processors, CAD and design programs and MIDI sequencers should be upwardly compatible with the Falcon. In practice, ST software that does not follow the Atari programming "rules" exactly run into problems. The dongles for high end MIDI packages are going to have to be redesigned and some programs will have to be "tweaked" to make them 100% Falcon compatible. Upgrade versions should be available from the major software houses.

3. Will the Falcon use SIMMs memory slots?

stf: No, Atari have designed a new type of memory card that plugs onto the Falcon motherboard to save on production costs. Falcon memory cards will be available in 1MByte, 4MByte and 16MByte versions. Prices for the cards are said to be comparable with the cost of SIMMs memory.

4. Does the Falcon have MIDI sockets?

stf: Yes, the Falcon has the same MIDI capabilities as the ST and TT with identical MIDI in and MIDI out ports. MIDI thru is also available on the MIDI out port, wired to pins 1 and 3 in traditional ST fashion.

5. Will the joystick and mouse ports on the Falcon be easier to get at?

stf: Because the first models of the Falcon use the traditional STE case, the joysticks are in the same place. However, the next version of the machine is going to be in a Mega ST style case, so the mouse and joystick ports will be in a more sensible position.

6. Will Atari hard drives work on the Falcon?

stf: Any Atari hard drive with a SCSI socket plug directly into the Falcon SCSI2 port; drives with DMA ports will not be able to connect directly to the new machine.

However, Atari told us that because the DMA signals are available on the SCSI2 port, all that you're going to need is a specially wired lead to connect to ST drive. This has not yet been confirmed. Any SCSI drive can be plugged in and used directly with the Falcon.

7. Will Atari be making a Mega ST style version of the Falcon?

stf: A Falcon with a Mega ST style case with separate keyboard and main processor unit is planned for early 1993.

8. Will STF be covering Falcon software, and will the name of the magazine be changing to Atari FORMAT?

stf: We are going to be covering all aspects of Atari Falcon news which will involve reviews and articles about Falcon software and hardware. There are no plans to change the name of the magazine as far as we know.

9. Will I be able to use the Atari SC1435 monitor with the Falcon or will I have to spend up to £1,000 on a VGA monitor?

stf: Yes, you will be able to use all the Atari monitors with the Falcon, only some of the higher VGA resolutions will be unavailable. Atari monitors (and even TVs) will be able to display many of the 256 colour and true colour modes available on the Falcon. SVGA colour monitors are nearer to £150 in price than £1,000, so buying one isn't going to break the bank.

10. When will I be able to buy a Falcon, and how much will it cost?

stf: The latest news we have had for the release of the Falcon is the middle of November 1992, so you should be able to get one today! The 1MByte version of the machine without hard drive is priced at £499, but many suppliers are already offering lower prices than this.

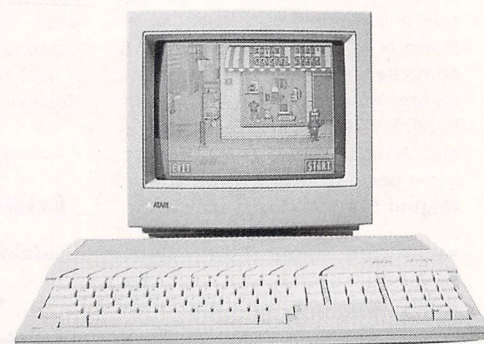
Want to share your innermost emotions about things ST with 70,000 others? Then write to The Editor, Feedback, ST FORMAT, 30 Monmouth Street, Bath, Avon BA1 2BW.



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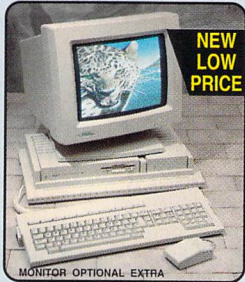
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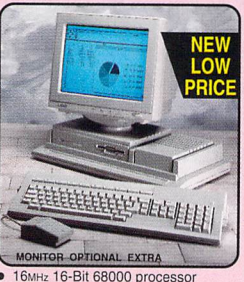
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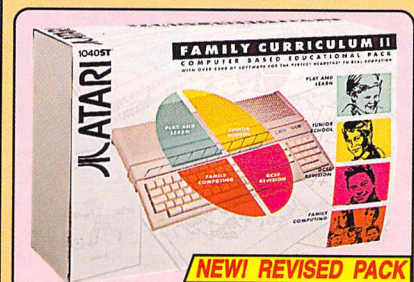
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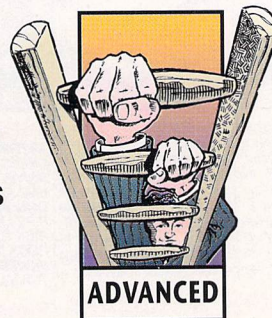
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THE HARD STUFF

Hard drives for STs are now cheaper than ever. Buying the drive is only half of the deal, though - you have to learn to use it wisely and look after the data on it.

Clive Parker takes a look at some of the essentials needed for your drive to stay in tip-top condition



You've got your shiny new hard drive set up and you've transferred all your software when you come across an unexpected problem. How on earth are you supposed to keep track of where everything is in among the incredible maze of files and folders? What if you don't

want to use a Desk Accessory, or if an AUTO folder program causes your system to crash?

These may not seem like particularly major problems if you only ever use a floppy drive, but if you are looking for a particular file somewhere on a 100MByte hard drive it can be a nightmare of

searching through thousands of directories. The new versions of TOS (2.05 and higher) have a search function built into the Desktop file menu so you can search for file names including standard wildcards, so setting up a search for files including the characters *.P?3 would look in all directory paths for

Degas high resolution picture files, both compressed and uncompressed. Although this facility is an enormous help, it still leaves many other areas that need looking after. To this end there are several utilities around specifically designed to make your hard drive easier to use and look after.

DIAMOND BACK 2

FROM: LADBROKE
COMPUTING
INTERNATIONAL
☎ 0772 203166
PRICE: £29.99

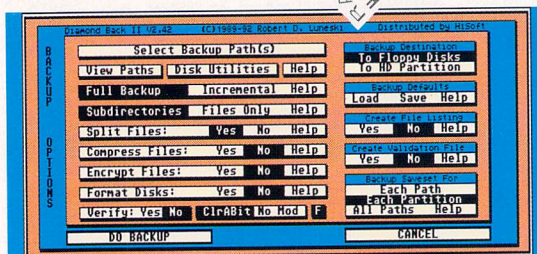


Diamond Back is the cream of the crop when it comes to hard drive backup - it's very easy to use and as adaptable as you're likely to find. The program is very easy to get into, with simple menus and options. Making your first backup following the

instructions in the manual can be achieved in minutes, it's that even-a-total-ST-illiterate-can-do-it easy.

Backups can be normal file backups, image backups and compressed file backups - there is even an option to back up Spectre GCR partitions. The final touch is the floppy disk calculator - just enter the type of floppy and format options you intend to use and the program tells you how many disks you need, so you can pre-format them. Wonderful stuff.

■ **Diamond Back 2** is so easy to use it fully deserves the **FORMAT Gold** it received in issue 37.



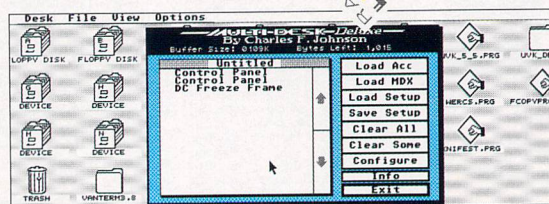
MULTIDISK DELUXE

FROM: ATARI WORKSHOP
☎ 0753 832212
PRICE: £39.95

This is a great program enabling GEM's limit of six Desk Accessories to be circumvented. *Multi-disk Deluxe* can be used as a DA which takes up one slot in memory or as a Desktop program enabling other DAs to be loaded and unloaded. So if you are using a program without a folder creation option and you want to create a new directory, you can simply load in a folder creation DA from the *Multi-*

desk Accessory slot. The program works best as a time saver by using non-resident Accessories. These use pre-specified areas of memory and are designed for use "on the fly" on a one off. If you have booted your system and find you need another DA, it can be loaded in as a non-resident Accessory, used, and then unloaded. Just set up a buffer large enough for your biggest DA which gives enough room for any Accessory to be used. Simple - even the manual avoids jargonese - and essential if you have a hard drive.

■ **Multidisk** enables you to stuff your memory full with DAs until there is no room left to run programs.



HOTWIRE

FROM: ATARI WORKSHOP
☎ 0753 832212
PRICE: £29.95 OR WITH
MAXIFILE (OPPOSITE) £49.95

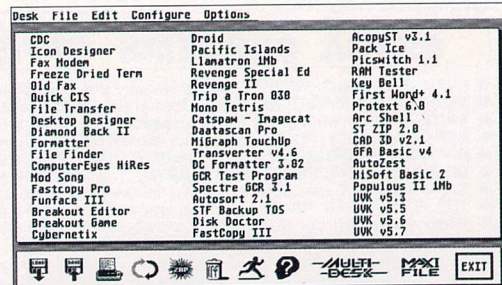
Hotwire is a menu utility for launching programs, this one is different to the norm, though, because it enables you to initiate any program on your hard drive by selecting it from a menu - not just DAs or AUTO folder programs. Not much use, you may think, but you'd be wrong. OK, imagine you have a good sized hard drive -

105MBytes seems reasonable. On this drive you could have one program for each 100K of disk space - that works out at over 1,000 possible programs to search for and load, delving down through directory after directory. It can take quite some time to find a program you don't use very often.

Although you probably don't have that many programs on your hard drive, it is still a big time-saver to have your most popular 54 programs on-screen ready to run at

the press of a key. That's what *Hotwire* does - and you can even have other lists of programs to load and run. You could keep separate menus for graphics, DTP packages, WP programs and utilities and change

menus when you need to. *Hotwire* is a handy program which soon makes itself indispensable.



■ Just press the simple hotkey combination to run a program - um, was it <Alternate> <Shift> and <C> <R> <A> <P> for the on-line Eldorado update?

MAXIFILE 3

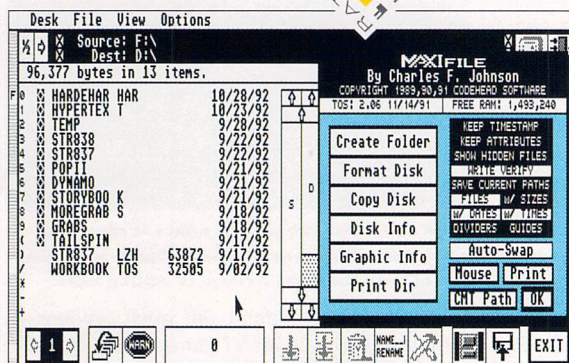
FROM: ATARI WORKSHOP
 ☎ 0753 832212

**PRICE: £29.95 OR WITH
 HOTWIRE (OPPOSITE) £49.95**

What can we say? This is another Codehead product designed to prevent ST-related hair loss by giving you total control over the files on your hard drive – it modestly calls itself “The File Management Supertool.” It is a Desk Accessory which you can call at any time you like to perform maintenance on any of the files lurking on your hard drive.

There are many functions available in *Maxifile 3*

-ranging from altering the attributes of your programs to performing mass transfers of files from partition to partition. All the usual file-type stuff is catered for, like creating folders, file copying, disk backup, formatting disks and so on – virtually every file manipulation tool you can possibly think of is covered here. Since *Maxifile* and *Hotwire* were designed by the same people, the two programs are compatible and work happily in tandem. Two manuals are provided so you can make the best use of *Maxifile*. Get this to earn eternal adoration from your ST.



■ *Maxifile* gives you 100% control over all aspects of your file maintenance and has (almost) innumerable options. Believe us – it deserves a place on your hard drive.

SUPERBOOT 7.4

**FROM: STF COVER DISK 36.
 SEE PAGE 58 IF YOU MISSED
 THAT ISSUE**

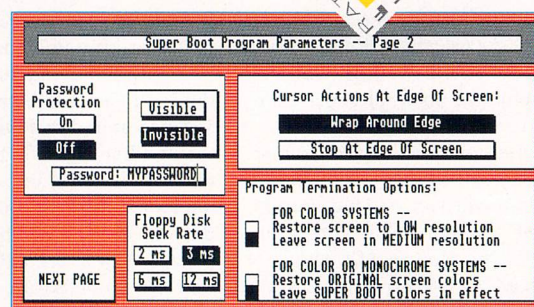
Superboot 7.4 is an almost vital utility if you're in possession of a hard drive. Why? Well, if you glance back to the intro on these pages you can see we mentioned loading different Desk Accessories and AUTO programs every time you boot up (if you need to, that is) to run different applications.

Superboot lives in your AUTO folder and is set up to be the first program to run – it then displays a menu of all AUTO folder programs and Desk Accessories on the drive (normally on C:) on a hard

drive). Using the cursor keys to move through the menu, and the Spacebar to select or de-select items, you can load a unique set of utilities every time you boot up.

This sort of thing is exactly what you need for a hard drive because there are hundreds of AUTO programs and DAs available, and using the menu system means you do not have to manually disable and enable utilities before resetting your machine.

With up to 30 predefined setups that can be launched from a function key along with separate DESKTOP.INF files and GDOS setups, this is one Shareware program that is well worth registering for.



■ Left a bit, right a bit, up a bit and press the Spacebar. The item selected is now enabled. Stand by for boot sequence to begin... This is the configuration program where you set all the default options.

X-BOOT

FROM: ATARI WORKSHOP
 ☎ 0753 832212

PRICE: £29.95

This program is a commercial offering which provides very similar features to *Superboot 7.4* (above) but with an improved range of options. You can set up and load all your DAs and AUTO programs into start-up screens with the added bonus of a built-in toolkit. Getting the program on to the hard drive is dead easy – the installation program on the floppy takes about 20 seconds to transfer the files to the hard drive. It's a bit harder to change the awful default screen colours to something readable, although the configuration program soon sorted this out.

X-Boot is an excellent program with many handy functions, but it just doesn't feel quite as comfortable to use as *Superboot*.

HARD DRIVE TURBO KIT

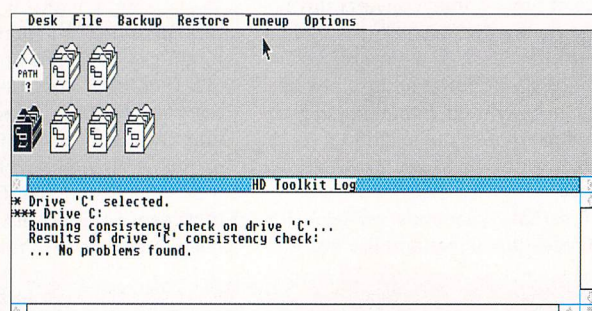
FROM: LADBROKE COMPUTING INTERNATIONAL
 ☎ 0772 203166

**PRICE: £4.99 WHEN YOU BUY
 IT WITH A HARD DRIVE**

Michtron's hard drive *Turbo Kit* is one of the older hard drive utility programs around, though it is still very popular and useful. It is split into three main sections, backup, optimization and memory cache, all of which are easy to use.

The optimization program works by reorganizing files on the drive so that the files become continuous blocks of sectors – this process does take a while but you do benefit in the long run with a marked speed increase. While the program is modifying the disk contents, data files are rewritten to temporary files and locations. If you interrupt this process you can corrupt the data, so be very careful when you use this utility.

The backup utility can either write to normal GEM format disks



■ Hey, we've just run a level one diagnostic on drive C. No problems found here, Captain.

or its own special format, called TAR. The advantage of using the TAR format is speed – the entire contents of a hard drive can take a while to copy to a normal disk file by file, but the TAR backup uses image copy techniques so as to ensure maximum speed and efficiency when you're saving or restoring data.

The cache program works by retaining details of the last sectors accessed on the hard drive. By holding these details in RAM rather than re-reading the hard drive

sectors, access speed is increased markedly. By using the default options suggested in the configuration program, a good balance can be achieved between best access times and memory used for the cache. Both of the main utilities use GEM menus for all options and are relatively easy to use – the manual is adequate but could have been reproduced to a better quality. Despite these little niggles – and that's all they are – the *Hard Drive Turbo Kit* is a good suite of programs worth laying your mitts on.

A BIT OF AN OOPS!

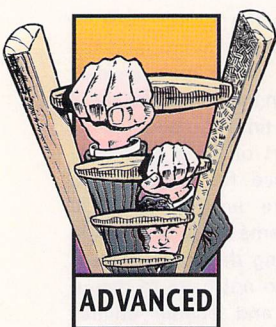
A couple of tiny errors crept into the hard drive roundup in *ST FORMAT 39* concerning the Ladbroke Computing hard drive. Ladbroke would like us to point out that their drive is only 51mm high, not over half a metre as quoted. The power light is dual pur-

pose and doubles as a drive access light. The reason that the fan in the drive is so quiet is because there isn't one!

The access speed comparisons were also awry because we inadvertently tested the Protar drive with the cache on and the other

drives with cache off. The Ladbroke and Protar drives use the same drive mechanism and have identical access times.

In the light of this, we would like to increase the *STF* rating to 85% from 82%. Apologies again.



S-S-S-A-SAM-

Everyone's does it, but you can get busted for it if you're not too careful. Try it once and you're hooked
Chris Lloyd just had to find out what "it" was

Samples aren't only things salesmen try to impress you with, they're also a way of recording sound that makes it easy to go "nin-nin-nin-nineteen" just like Paul Hardcastle. The music scene is full of people sampling each other and games are full of snippets of speech and explosions. You can get the hardware to sample sounds yourself and the Falcon even has it built in. So what exactly are samples and why are they so clever?

Sampling is a method of converting sound into digital data which can be manipulated and replayed. Your ST is a whizz at fiddling around with such data, but can only deal with it in binary form. The sampler uses an ADC (Analog to Digital Converter) which takes the signal from a sound source – CD, microphone or whatever – and analyses the amplitude of the signal at successive instants of time. It then converts the signal into a binary number which is stored in your ST's memory or directly on to a hard drive. The sound, which consists of differing air pressures, has already been converted into varying voltages by microphone or original recording.

Sound quality

The quality of samples depends on how frequently you analyse the signal and the bit resolution of the number it's converted into.

The frequency of the sampling is measured in kHz, in this case this means how many thousands of times a second a signal is analysed and converted. CDs are sampled at a rate of 44.1kHz, so the signal is processed 44,100 times a second. Samples for games are generally sampled at a rate between 5 and 20kHz. Obviously the higher the frequency the better, get above 16kHz and it starts to sound half-way decent. Bit resolution is the number of bits in the binary number the signal is converted into. A bit is a single binary digit – a nought or a one. Sampling is generally done at either 8, 12 or 16-bits. 8-bits gives 256 discrete signal amplitudes, while 16-bits, which CDs are sampled at, gives a whopping 65,536 amplitudes. So, the higher the bit resolution, the closer the digital sound is to the original.

Using a high bit resolution and sampling rate gives brilliant sound but also creates a huge mound of data. One second of 8-bit sampling at 32kHz needs 32K of memory – double that if you want stereo. CD quality recording needs an humongous 176.4K of memory a second. To sample a three and a half minute single requires a seriously huge 37MBytes, hence the systems that record straight on to a hard drive. With the base memory of the ST range at 512K this



The STOS Maestro sample editor is easy and quick. Like all editors you get a visual representation of the sound and a range of editing tools.

explains why you don't get great woggles of sampled sounds in an ST game – it all costs far too much precious memory.

Signal conversion

Before you can hear a sample it has to be converted back into an analog variable voltage signal and then into sound using the more familiar technology of an amplifier and speaker. On an STFM the DAC (Digital to Analog Converter) process is handled by the central processor and the data piped to the Yamaha sound chip which uses all three sound channels combined to produce the signal. This explains why you can't

GET TOOLED UP

So you want to get sampling? No problem, whack a sampling cartridge into the cartridge port, attach a sound source and off you trot. The maximum sample size is determined by memory size. There are direct to hard disk systems like Sound Tools, but these cost up to £2,000. If you need to handle huge samples it's probably better to wait for the Falcon with its 16-bit sampler built in – if you can control your excitement.

The ST is blessed with a range of hardware samplers, here are five of the best. Also available are Replay Professional which is an 8-bit sampler with a 12-bit playback for improved sound. There's also Mastersound 2 which you can get for an amazing £14.95 – see page 68. It's a fairly basic 8-bit sampler, but if all you want are sound effects for your game then it's up to the job. Both of these packages are available from Microdeal on

0762 68020 who seem to have pretty much taken over the entire sampler market.

Replay 16
FROM: MICRODEAL
0762 68020
PRICE: £129.95



Fantastic value – a 16-bit resolution and a sampling rate up to 50kHz. Samples can be transferred via MIDI to synths or other samplers. The editing controls are comprehensive, there's a drum machine and MIDI Play programs are included. Getting into serious sampling has never been cheaper or as much fun to use.

STF Rating: 92%

Stereo Replay
FROM: MICRODEAL
0726 68020
PRICE: £89.95
This is a stereo 8-bit sampler

with sampling rates of up to 48kHz and features full STE support. The hardware includes its own DAC to improve sound output. The editing software is very comprehensive and jam-packed with features including a range of digital filters and special effects like cross pan fading. Excellent stuff.

STF Rating: 89%

Replay 8
FROM: MICRODEAL
0726 68020
PRICE: £59.95

An 8-bit effort with sampling rates of up to 48kHz. There is a drum machine and MIDI options. The editing software is powerful – a good place to start.

STF Rating: 82%

STOS Maestro Plus
FROM: MANDARIN
0625 859333
PRICE: £71.99
Designed to complement STOS

Basic, STOS Maestro Plus contains all you need to add samples into your own STOS programs. This sampler is an 8-bit affair with sample rates up to 32kHz. The editor isn't the most sophisticated, but is very easy to use. It's too expensive at this price though – it's a good idea to keep an eye out for special offers.

STF Rating: 79%

Stereo Master
FROM: MICRODEAL
0726 68020
PRICE: £39.95

Stereo Master works on all STs but you need an STE to get the stereo effect using the phono sockets on the back. It uses a two channel 8-bit sampler with a sample rate up to 28kHz. You can apply a range of effects and play the results with a MIDI keyboard. It has its limitations, but at this price it's a beauty.

STF Rating: 77%

SAMPLE-PLED

WHAT DOES THAT MEAN?

ANALOG: In sound technology, this describes a conventional electric signal. A continuous signal producing smooth waves.

BIT: This is a single binary number, either a nought or a one. The only numbers computers can understand. All the data and programs you use on your ST are written in binary code.

BIT RESOLUTION: The number of bits used to describe the amplitude of the sound.

DIGITAL: Data which consists of numbers – discrete pieces of information.

DYNAMIC RANGE: The range of sound from the loudest to the quietest. 8-bit samples have a

range of 48 decibels while a 16-bit sampler can manage up to 96 decibels. Samplers which have a wide dynamic range are the ones to go for, because their sound reproduction is much better.

FAST FOURIER TRANSFORM (FFT): Three dimensional plotting of frequencies against time, like a graphic equaliser.

FREQUENCY: The number of times a second, measured in Hertz. Sampling rate is measured in thousands of Hertz, as is the pitch of a musical note.

SAMPLE RATE: Frequency at which the sound signal is analysed and converted into digital information.



have samples and chip music at the same time without things getting tricky. The STE has a dedicated DMA (Direct Memory Access) sound chip which handles 8-bit samples, leaving the main chip to get on with the game or whatever.

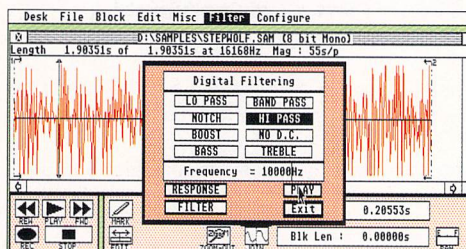
The DMA chip can handle stereo and has adjustable bass and treble. It gives much better sound quality, the only snag being the four fixed replaying frequency rates. The Falcon has some serious hardware, a built in 16-bit DAC and ADC and a Digital Signal Processor capable of processing the signal in real-time, so you can add some snazzy effects and hear the results straight away. From the chips the signal is amplified and played back, the quality of the circuitry affecting the sound quality. Connecting a hi-fi or speaker system is a must – the monitor's little speaker just can't hack it. To improve things, the better samplers use their DAC circuits' incorporating filters to smooth out the jaggles in the signal.

What's the point?

So why should you go to all this bother to convert sound to and from a digital format? If you want realistic sounds coming out of your ST, then the only real way is to sample it. A good

game accompanied by screams, explosions and so on, is a world above the strangled beeps made by the ST's sound chip. For music it opens the doors on sophisticated ST-controlled editing. Once the sound is in binary you can edit it like any other binary data, applying all sorts of heavy mathematical effects and filters, cut and paste sections, or whatever. You can generally fiddle about with it without any loss of quality – if you were to try the same on a tape machine the sound quality would rapidly fall away.

Sampling might sound like the ideal recipe for perfect sound reproduction, but it has its own problems. Digital data, no matter how high

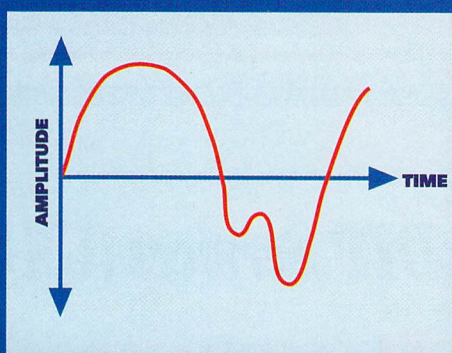


■ You can do a lot fiddling and filtering in sampling, using only a couple of mouse clicks.

the sampling rate and bit resolution, is always going to be an approximation of pure analog sound – you can't improve on the real thing. Digital recording has its problems with distortion, too. Granulation at low noise levels occurs when there just aren't the numbers of steps to describe the quiet sections, with a resultant loss in sound quality. Most of a sound tends to be in a limited section of the dynamic range. For example, you may have 16-bit resolution, but most of the noise is going to be in a fairly narrow band, thus limiting the effective resolution. Sampling also adds high frequency distortion which needs to be filtered out. To cut out the distortion, the sampling rate needs to be over 40kHz, although you can get away with lower sample rates in games. A sampler only sounds as good as the weakest link – flash DACs and chips need to be hooked up to decent circuitry and amplifiers to make the most of a system.

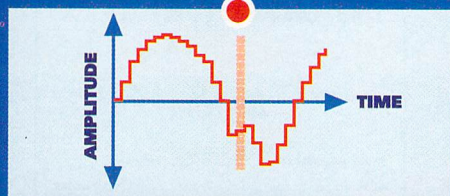
Sampling gives you the chance to make near perfect recordings and opens a whole new world of possibilities. Most sound studios have a sampler or two tucked away causing a minor revolution in music technology. You and your ST or Falcon are part of that r-r-revolution. **stf**

ANALOG VS DIGITAL



AN ANALOG SIGNAL: This consists of a continuous stream of information, the sound curve is smooth and theoretically made up of an infinite number of points. In audio equipment this trace is formed by the variation in voltage within the signal.

Each "slice" or "sample" is represented by a binary number. The frequency of these samples gives the sample rate and the number of bits used to describe each "slice" gives the bit resolution.



A DIGITAL SIGNAL: The pure analog wave has been converted into discrete pieces of information. The wave looks blocky and, to fool the ear, you need to use masses of digital info to get a decent sound. It's easy to edit and filter without losing sound quality.

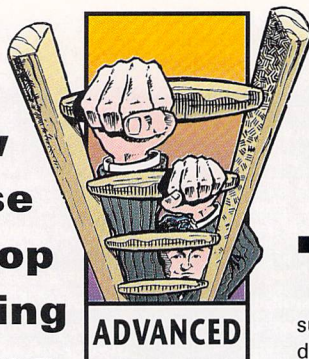
STEP THIS WAY

There you are happily nicking everyone else's sounds when you're nabbed by the long arm of the law. Copying other people's work for your own purposes without permission is illegal. When the copyright laws were put together, the idea of samplers wasn't dreamed of – as usual, the legal world has lagged behind technology leaving a rather confusing situation.

Borrowing a sampled drum beat here or synth sound there isn't going to lead to midnight raids, but using whole sections or vocals might. Utah Saints used a chunk of Kate Bush's *Cloudbusting* and ended up paying her most of their royalties. James Brown has a team of legal eagles trying to recoup some rewards. If you're only going to use the samples within the safety of your own home, there's no problem. If you plan to distribute or use them commercially asking permission is a good idea.

YOUR FIRST MILLION

You know how to use desktop publishing packages, you have a flair for document layout and you want to start your own business. Put the three together (forget the recession) and yourself into Paul Hughes' capable hands - and start making some money



They say that making your first million is the hard bit - subsequent riches coming to you easily. If you're searching for success - financial or otherwise - in your own desktop publishing business, you need to start off pointed in the right direction, armed with the best tools available to you. Apart from the right hardware and software combination, you also need your own business stationery - for example, business cards, letterheads and compliment slips, as well as a portfolio.

Remember that if you intend to offer your services on a professional basis, it follows that your own stationery should also look professional. The first thing you need is a name for your business - try and think of something memorable but not too long and convoluted. Next you need to decide what information should be displayed on your business card.

Should I list all my services?

The most attractive cards are the simple ones where there is just the company name, cardholder's name, address and telephone and fax numbers. The problem with listing all your services is that it can look messy and, in six months time, there may be a service you don't want to continue to provide or one which you would now like to include but isn't listed on your card. Another downside is where a prospective client has a particular query in mind, but, since it hasn't been listed on your card, he doesn't bother to ask whether you can do it. Remember that the quality of your work

may be judged solely on the artistic presentation of your card, so it is well worth giving some extra thought to the final appearance. Collect as many different cards as possible to give you an idea what looks good. In general, unless you have been trained in graphic design, keep things simple and you won't go far wrong.

Letterheads and compliments slips

These should be designed on a similar format to your business card. Depending on the style of your company name, you may find that you need to change the layout of the address and telephone and fax numbers to give a more pleasing effect. Experiment, but try and stay faithful to the overall company image. This applies equally to your own stationery or to a prospective client's.

Portfolios

Depending on the type of work you want to do, at some stage you are likely to be asked for examples of your work. This may seem like a Catch 22 situation, since you may not have actually done any outside work at that stage, but there are several things you can immediately put into your portfolio. Incidentally, you can buy a portfolio at any of the well-known high street stationers - an A4 ring-binder that takes clear plastic wallets is ideal.

Start by printing out all your fonts. Typing in: "The quick brown fox jumped over the sleeping lazy dog," gives you every letter of the alphabet. Arrange the fonts in logical sections

BUSINESS CARDS

File Page Text View Extras
R:\IDERS.COM

DTP Services (UK)

(A)

1

30, Monmouth Street, Bath, Avon BA1 2BW
Tel. (0225) 442244 Fax. (0225) 446019

Andy Parker

This first business card is a basic example of the sort of thing you're likely to want. It's easy to produce, gives all the information about you a prospective client is going to need to know.

File Page Text View Extras
R:\IDERS.COM

DTP Services (UK)

(B)

2

30, Monmouth Street,
Bath,
Avon
BA1 2BW

Tel. (0225) 442244
Fax. (0225) 446019

Andy Parker

This second card is a variation on the basic theme, with just few minor alterations to the layout of the names and addresses. Both cards are straightforward and can easily be reproduced by your print shop.

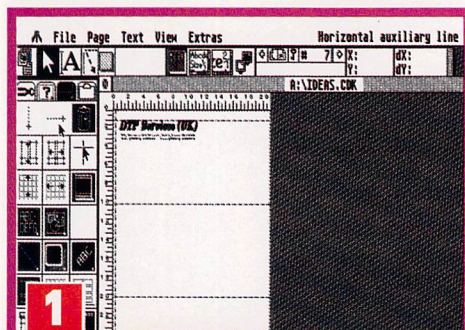
File Page Text View Extras
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DTP Services (UK)

3

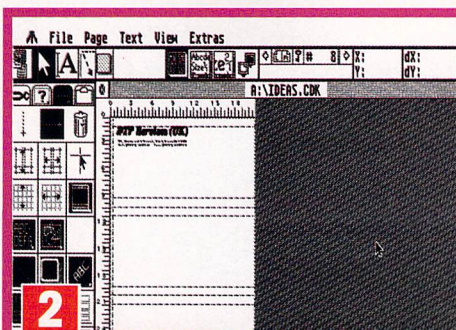
Here there's a drop-shadow on the logo. For best results you should only use shadows when you're outputting to bromide or film (see STF 39). This kind of design can make your letterhead harder to construct.

COMPLIMENTS SLIPS



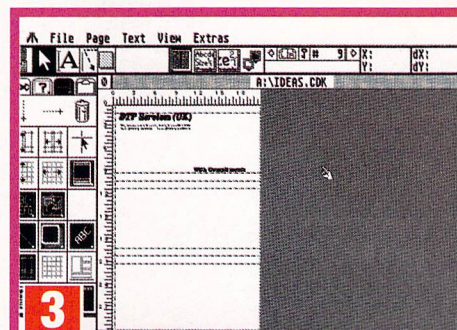
1

Based on the letterhead matching the first card (see below), make a copy on a separate page. Using the ruler and auxiliary grid lines, draw a horizontal line 1cm from the top of the page and then two further lines at 9.9 cm down and 19.8 cm.



2

Your A4 sheet (21cm wide x 29.7cm deep), is now divided into three parts. This is the industry-standard compliment slip size. Butt the letterhead up to the top line. Next, guided by your grid lines, create extra lines 1cm above and 1cm below, as shown.



3

Now add your "with compliments" to the line at position 8.9 cm - the top one in the group of three. Repeat this in each of the three parts and you can then get three compliments slips out of one piece of film, thus keeping your costs to the minimum.

beginning with the serif-types (a serif is the stroke at the end of a line on a letter, in fonts such as Times Roman, Garamond and so on), followed by the non-serif types (text made up of plain lines as in Helvetica, Futura and the like), and ending with any "fancy" fonts like Script or Old English. Refer to *STF* 40 for commercial font suppliers - and if you don't have a copy, turn to page 58 to order your issue. It may seem pretty obvious, but ensure you don't forget to print the font name alongside each example. Next, gather together all your best clip-art and print a good selection. If you would like more clip-art than you've got at the moment, refer again to issue 40 for more sources.

Samples

You now need some samples of your stationery. In general, you should stick to around two or three different styles of business cards, letterheads and compliment slips for your portfolio since you are likely to find most clients don't want anything too clever - although obviously tastes do vary. Some clients tend to get confused if you offer too many options.

Be creative with paper

Try printing some samples on coloured paper to give a visual lift to the overall appearance of

your portfolio. There are a multitude of paper tints, weights and grades on the market which can significantly enhance your work.

Your portfolio should, by now, be looking pretty healthy. You could try adding something a little different like an A4 poster saying something like: "Closing down sale! Massive reductions! Everything must go!" Include starbursts and anything visually attention-grabbing, but be careful not to over do it. For further impact try getting hold of some Day-Glo paper in various fluorescent shades.

The quality of your work may be judged solely on the artistic presentation of your business cards

Other things you could include in your portfolio are party invitations, sales leaflets, CVs, invoices, newsletter front pages, club membership cards, labels - anything at all you feel is likely to be applicable to the people you want to attract to your business.

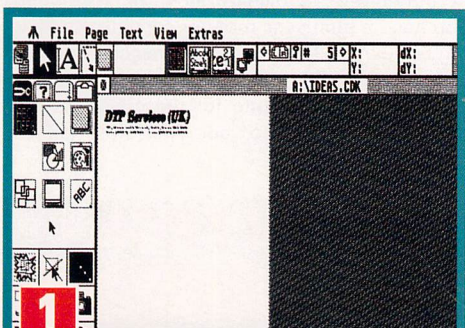
Junk mail... or is it?

Hang on to every brochure and leaflet that lands on your doormat. They can become useful sources of inspiration - who knows, it might not be long before your work becomes a source of inspiration to others. Study advertising in newspapers and magazines for the techniques professional ad people use for getting messages across. It's surprising how many clients not only ask you to provide the layout when you're putting a leaflet together, but also expect advice on the sales message. You may not feel too confident tackling that sort of thing at first, but with a bit of practise, you'll probably find you actually enjoy it. And you get paid for it!

Remember that many printers, lasers included, don't enable you to print closer than 13mm from the top of the page. This means some juggling if you are producing your own compliment slips. However, if you intend to use a bureau outputting to bromide or film (see issue 39), then this problem is unlikely to arise, because everything you see on your screen is printed. Make sure your screen settings are for an A4 sheet.

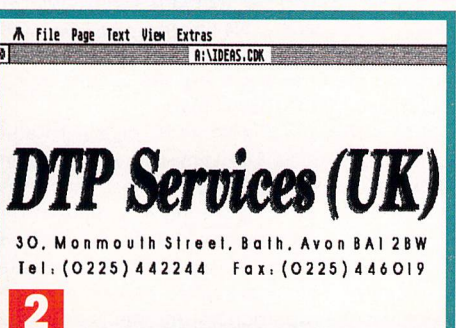
So, there you have the perfect and professional way to start your desktop publishing business - now all you need to think of is that inspirational name... **stf**

LETTERHEADS



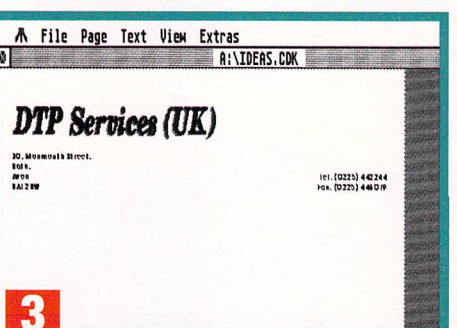
1

A full view of an A4 letterhead that would match the card on the far left. Note the positions of the name and address relate to those on the letterhead and cards, giving a consistent appearance.



2

A close-up of the same letterhead - note how well it matches its partner-ing card. Keeping the styles the same gives your business an identity that people can relate to without needing to read the words!

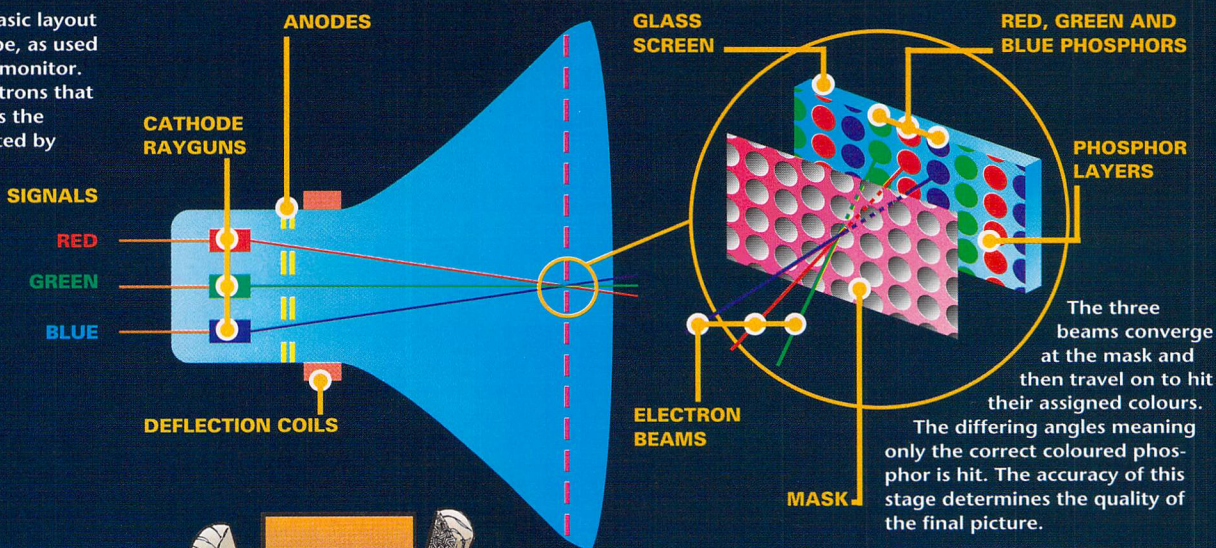


3

A half-view of the second card's prospective partner. As you can see from this, neither is right or wrong, it just depends what you personally like and the image you want to project.

CATCHING A TUBE

Here you can see the basic layout of the Cathode Ray Tube, as used in every colour TV and monitor. The cathode emits electrons that are accelerated towards the screen and then deflected by magnetic coils to hit the right spot on the inside of the glass.



RGB GBH



of a final colour. Get up close to the screen and you find that each pixel is, in fact, made from a collection of dots coloured red, green and blue – the different intensities of the colours give you the final colour. It's an additive colour system; if you have maximum intensities of all three colours you get the effect of white, while maximum intensities of red and green give a bright yellow. Your ST can produce eight different intensities of each colour, while the STE can produce 16. These combine to give 512 or 4,096 different permutations and hence the total palette.

Red, green and blue

Your ST produces its video signal for a monitor in RGB format, this means the information for the red, green and blue colours are transmitted separately giving a crisp clear picture. You can use the built-in modulator to connect your ST directly into a TV set, but this combines the information into one signal and the TV decodes it again leading to a degraded image. That's why it's always best to use a dedicated monitor rather than a TV. Although many modern televisions have SCART – Standard Connector for Audio, Radio and Television – sockets that enable them to accept an RGB signal directly, the tubes aren't as good and the circuits aren't optimised for the RGB signal.

Monitors and TVs have CRT displays, Cathode Ray Tubes. The technology dates from the valves you find in old radios. That glass you spend so long staring at is basically a huge valve; a stream of electrons are fired at the glass face which is covered in dots made of a chemical called phosphor which glows in proportion to the intensity of the beam. There are three beams in colour monitors and the screen is made up of alter-

natively coloured phosphors. Behind the screen is a mask full of tiny holes to ensure that each beam is only able to hit the correctly coloured dots.

The sharpness of the picture is determined by the dot pitch – that is, the distance between the dots. Monitors have a much finer dot pitch than TVs. The Atari SC1435 monitor has an excellent dot pitch of 0.41mm whereas a normal TV has a pitch of 0.6mm or greater. The Falcon uses VGA monitors to produce the better screen resolutions with typical dot pitches of around 0.3mm. Making such an accurate mask is difficult, especially as the screen gets bigger; you can easily pay twice as much for a 20 inch monitor as opposed to a 14 inch.

Atari's high resolution monitor has such a crisp beautiful display because there is no mask – the electron beam hits the phosphor directly, making an almost perfect display.

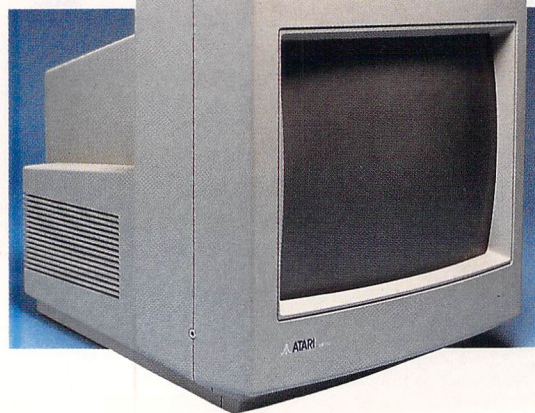
Beam me up!

The electron beams scan across the tube line by line until the whole picture is built up. The faster this happens, the more stable the picture. TVs have a vertical frequency rate of 50Hz, that means the picture is redrawn 50 times a second.

Your ST can handle 50Hz and 60Hz in colour and a impressive 70Hz for a high resolution monitor. To display all three resolutions you need a multisync monitor capable of changing frequency. If you haven't invested in a monitor and taken your graphics seriously, start now – there is no substitute for the crispness of a dedicated display. So, get your nose off the glass please. **stf**

Have you ever pressed your nose up against your ST's monitor and noticed all those little dots? Tiny points of light that are alternately red, green and blue. What's going on in there?

If you've mucked about with an art package you are probably familiar with pixels, the elements ST pictures are built up from. In low resolution the screen is 320 pixels horizontally by 200 vertically – 64,000 of them altogether. Each pixel is one of 16 colours chosen from a palette of 512 or from 4,096 colours on an STE. As in the world of printing, the colours are an illusion – they're made by mixing three colours to give the impression



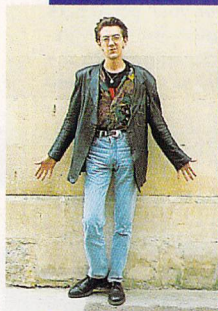
■ Atari's very own monitor, the SC1435. Take a look inside, though, and you can find a Philips tube. The picture is excellent – bold, bright and crisp.

FALCON FRONT

The new wonder-child, the Falcon, has seriously upgraded display capabilities compared to the ST. You can connect it to a standard ST monitor – colour or mono – as well as to a TV, composite monitor or just about anything. But for the really good stuff you need a VGA monitor, capable of displaying all the video modes right up to 768 by 480 pixels in 65,536 colours.

HELP!

GAMEBUSTERS



ANDY LOWE

He's mean, he's lean and he pulls the wings off birds. Games walk in fear of his shadow and he takes two lumps of sugar in his tea.

Cheated this month:

Indiana Jones and the last crusadePage 54
Ishar, legend of the fortress.....Page 50
Knights of the sky.....Page 49
Populous 2.....Page 49
Supercars 2.....Page 49
Ultima 6.....Page 56
Wizkid.....Page 53

ST ANSWERS

BILLY ALLEN



ST expert and bare back gnu rider, Bill likes to bungee-jump off his shed at weekends.

TIM TUCKER



Tim's ambition is to glue hand painted eggs to lampposts and take surrealistic photos of them.

CLIVE PARKER



Resident techie wizz, slug farmer and owner of a complete set of Pinky and Perky CDs.

TONY WAGSTAFF



This man eats, sleeps, lives and breathes on his ST. No wonder it doesn't work.

Techie tips this month:

Assembly pointers.....Page 62
Falcon questions.....Page 64
Games.....Page 64
How hand scanners work....Page 60
Modems.....Page 60

Music and Midi.....Page 62
ST FORMAT's BBS.....Page 61
STOS corner.....Page 60
VGA Monitors.....Page 64
Write On.....Page 64

WIN SOME DOSH!

Did your all money go up in smoke on Bonfire Night? Has Guy Fawkes left you skint? Then simply send us a hot and happenin' Gamebusters or ST Answers tip, along with your name and address to ST FORMAT, 30 Monmouth Street, Bath, Avon BA1 2BW. You could be the lucky recipient of one of our highly-prized STF rosettes and £25.



Attention! Cheats, tips and solutions at one 'o' clock. Your home is in danger. Evacuate now. This is not a drill, it's a screwdriver. Welcome to this month's Gamebusters. As usual, Andy Lowe apologises for the silly intro...

THE ODD ONES

This space is specially reserved for the misfits – those odd chappies you just can't pigeon-hole. Here's a merry tip or two to give you a jovial shove in the right direction.

KNIGHTS OF THE SKY Microprose

This first snippet comes from Derek Price of Newport. If you can survive their attacks for long enough, climb above the service ceiling of the enemy fighters you encounter – this assumes your aircraft has a higher ceiling. The enemy then hang on their props – eh? – trying to reach your altitude, and are sitting ducks. This approach is particularly useful when challenging enemy aces.

POPULOUS 2 Bullfrog

Press <F9> for more manna, says Daniel Rodziewicz of Stoke-on-Trent. If this works, it makes the game a little easy... But there you go.



Well, it's a very nice settlement, actually. Very picturesque. There's a little corner shop down the road and the neighbours are very friendly. Occasionally, someone drops fire-bombs on us, but that's the only drawback.

SUPERCARS 2 Gremlin

Oh no, it's Daniel Rodziewicz again. This time, he says that if you enter your name as "Wonderland" for Player One and "The Meek" for Player Two, you can't lose. Check it out and see.

Drive 'em hard and fast. The Supercars. He was a racing driver who was set for a make or break confrontation with the best. She was his girl – cool, sophisticated, sexy. This is an ST game, not a film.



TURN TO PAGE 60 FOR ST ANSWERS

ISHAR, LEGEND OF THE FORTRESS Daze

An almost sickeningly good French role-playing game Ishar has all the usual ingredients – forests, spells, ugly creatures who wave swords at you, fun pubs, people with white hair and unpronounceable names...



and if that's not enough, there's the translation hiccups to chuckle at. Anyway, cheers to William Leary from London, who sent in some rather invaluable tips which should enable you to get that tiny bit closer to slaying the slimy old git, Krogh...

Explore each section thoroughly before you rush onto the next. There are plenty of bags of gold and other

items lying around. Look for the bush-mazes and try to steer yourself through, poking your nose into every corner. You need the money.

Use your head when recruiting characters. Think twice before you recruit thieves – they have a tendency to sneak off with your loot when you've crashed out at one of the inns. Assassins are equally unstable.

If any member of the party starts to become a bit of a pain, try to sack him. If no-one agrees, don't slaughter him – his mates may retaliate. Just nick

all his weapons and gold, then stick him at the front of the configuration. In a fight, he is the first to be killed. A bit merciless, but highly effective.

The training courses are a bit damaging on the old gold reserves, but they're the best and quickest way to build up that essential character experience. Once you're outside the training house, *save the game*.

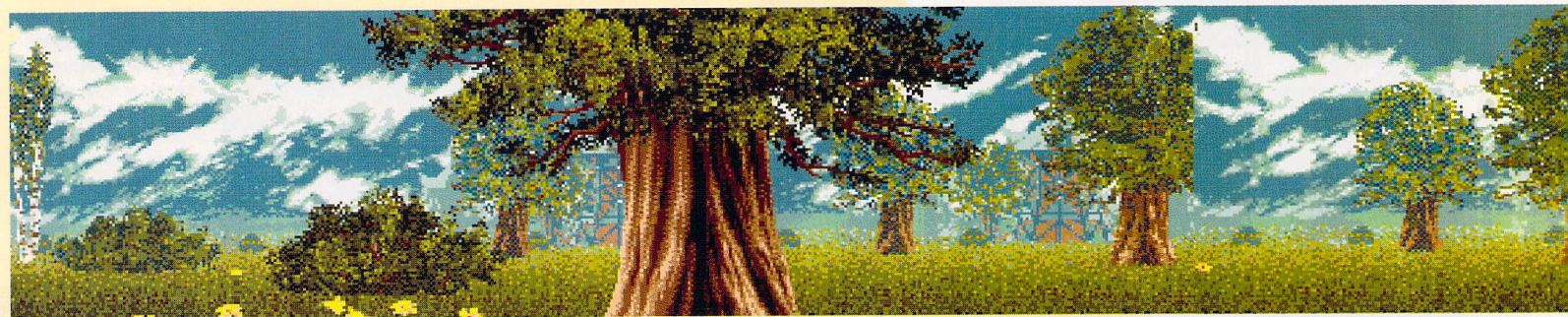
Now, send all of your party back in to the training house and try everyone out. The character who passes the test most effectively is the one you



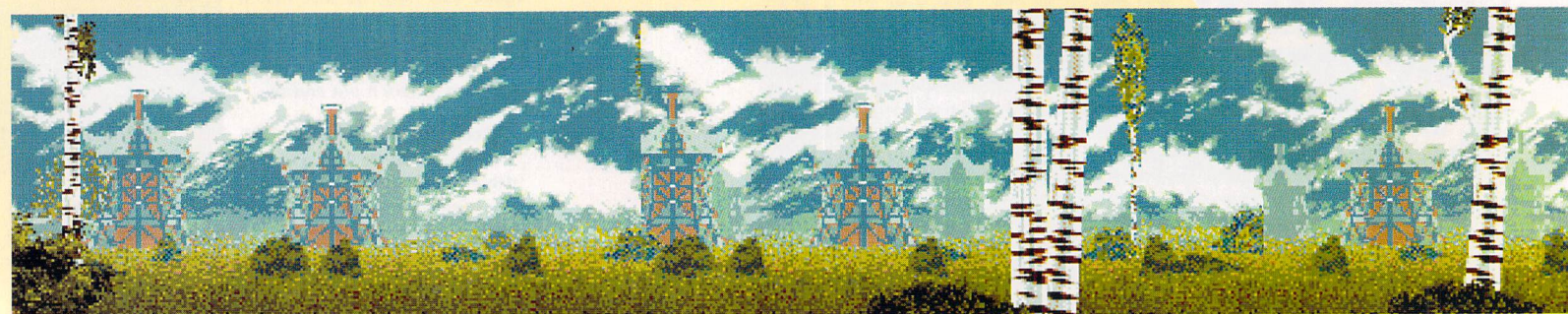
Getting started on Ishar... Borminh is a smooth talker. Give him money and he tells you the names of a few good inns. You



Carry on eastwards and, near a pool, turn south. Enrol Kiriela in the birch wood. Place Kiriela in the second line and



Continue to the south west and skirt the bushes to the west. Kill off the Orcs and go into the house to recover the treasure. On the

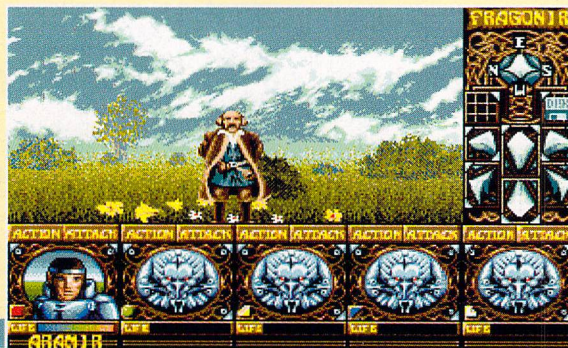


When you cross the bridge, beware of the barbarian. He's tough, a few fireballs should deal with him. In Lake City, don't enrol

must train exclusively when the saved game has been reloaded.

Finally, three snippets of brief, but vital, information. Write down the prices of all the items encountered. Enhance the map provided with a rough one of your own, note down all the important landmarks and don't be afraid to run away if you come up against someone who's a bit hard.

Good advice there, William, but now we need the complete solution to this rather wonderful game. Can anyone oblige? There's £25 up for grabs.



■ "Well, hi there, cutie pie. What's a big, strong warrior like yourself doing out here?" "I intend to seek out and destroy the evil one, Krogh, who has split this once fair land asunder. Will you join me in the fight?" "No, but you can come back to my cottage if you like."

can enrol Borminh, but he is a bit of a traitor, so don't fall asleep in his presence. Use him in fights to receive blow...



prepare a fireball rune. Turn south west towards Angarahnn where you should recruit Kirian at the inn, go shopping and visit Akeer.



way back, pick up the teleporter which is east of the house. After teleportation, turn south east and cross the bridge.



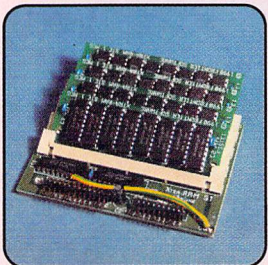
Golnol and Nasheer – they're traitors. Go south along the river and take the first bridge. Find White-Iron. Now you're on your own...

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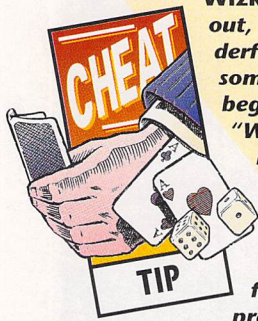


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WIZKID Ocean



Wizkid – way out, weird, wonderful and, er, something else beginning with “W.” Wacky, maybe?

Anyway, behold these tips and cheats for this pretty darned

bizarre little platform game – no, hold on, it’s not really a platform game, more a bounce-things-off-your-head-’em-up from the distinctly unsensible Sensible Software. The main tips come from Andrew Gillham of London and the bits at the end are courtesy of Sensible’s very own Jon Hare – the man who is currently taking over Peter Molyneux’s position as the most-mentioned programmer in STF. Oh, and if you’re good, we might just print the complete solution next month...

On Sunset Wizovard, finish the tune as quickly as possible and try not to lose any stars. When the shop appears, buy as many stars as you can. Even if you have full energy, you can buy more



■ Don’t you just hate having to get up? It’s so difficult, isn’t it? Even fictional ST game characters don’t escape the rigours of the early morning call, apparently.

stars for no cost. When you have enough money to buy everything, buy it. Next, jump onto the handle of the well until the bucket appears. Get into it. Enter the women’s toilet and pick up the can of soft drink. Now go into the men’s. Use the coin in the “thingy” machine and you are transported into a cavern, which looks like the Secret Cave picture below.

Go into the men’s and you’re faced with more doors, as shown in The Third Door drawing below.

The door on the right is a secret door, which leads to the cave maze. As the manual says, “Go through the exit, even though it’s not there. Try Room 32 to see what’s where.” Next, you’re faced with two doors. See the Cavern Maze picture below for the effects they have when you enter them.

You start from Room One. To get to Room 32, take the following route...

1. Right.
2. Right.
4. Right.
16. Right.
32. Right.

When you’re in Room 32, you are given instructions on the effects of the other rooms...

Continue: Room 124.

Game help: Between rooms 201-211.

The following is a list of rooms that have an effect on the game, starting from Room One:

Jump to Level Two: Room 46.
Directions: right, left, left, left, left, right.

Jump to Level Three: Room 51.
Directions: left, right, right, left, left.

Jump to Level Four: Room 58.
Directions: left, left, right, left, right.

■ God, this bubble-gum tastes terrible. It said it was strawberry-flavoured on the machine...

Jump to Level Five: Room 67.
Directions: right, right, right, right, right, left, left.

Jump to Level Six: Room 78.
Directions: right, right, left, left, left, right.

Jump to Level Seven: Room 91.
Directions: right, left, left, right, left, left.

Jump to Level Eight: Room 106.
Directions: left, right, left, right, left, right.

Jump to Level Nine: Room 123.
Directions: left, left, left, right, left, left.

Change sound: Room 76.
Directions: right, right, left, left, right, right.

Continue: Room 124.
Directions: left, left, left, left, right, right.

Hidden game: Room 206.
Directions: left, right, right, left, left, left, right.

Meanwhile, Jon says...

Hold down <H> when the game begins loading and you are rewarded with a musical treat.

If you’re in possession of an even number of stars, then the lava flow on Mount Wizimanjaro isn’t able to kill you.

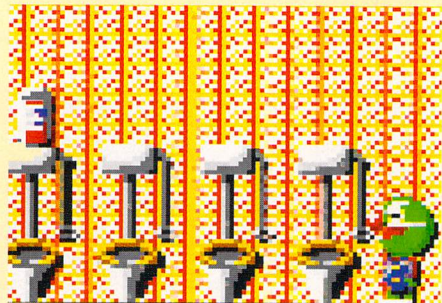
On the Wizball level, don’t shoot anything apart from the mothership at the end of the level. You are then given an extra five lives in the final, nostalgic confrontation with Zark. If this sounds a little, ahem, difficult then simply stay at the far right of the screen. It’s a safety zone. There. That’s the complete solution. If you still can’t complete Wizkid then you’ve either got a dodgy joystick or you’re completely crap. Which is it to be?



■ On BBC2 tonight it’s *The Wacky World Of Wizkid*, written by Bernadette Hughes and her husband Jethro, who is a radish-fetishist. In this week’s episode, Wizkid throws some bags of nuts at a bunch of fluffy chicks with hilarious results.

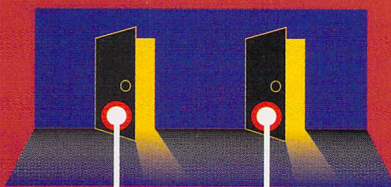


■ Miss Roper, who was famous for her acrobatic facial expressions, often blurted out the word “elbow” at incongruous moments for a little comic effect. At one point she almost made a living out of this, but then she got a job as a hang-gliding instructor and it all changed for her.



■ “Mummy, I just went for a wee and this strange man - who looked a bit like Pac-Man with legs and a green face - asked me if I wanted to see his kittens.” “Now what have I told you about telling lies?”

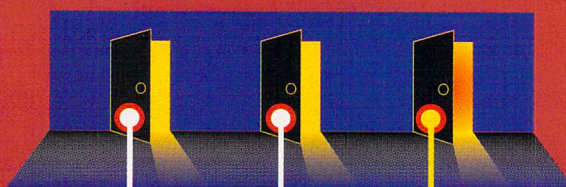
SECRET CAVE



Men’s

Exit

THE THIRD DOOR



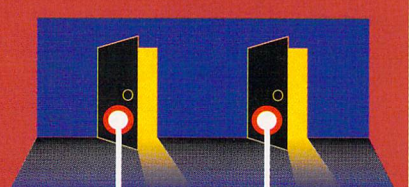
Men’s

Secret door

Can only be seen when approached.

Women’s

CAVERN MAZE



Left door

doubles the number and adds one every time.

Right door

doubles the number every time.

INDIANA JONES AND THE LAST CRUSADE Ocean

Jaz Pearson of Blackburn has been rather a busy individual over the past month or six. But he's won himself £25 for his trouble, having managed to complete this ridiculously complex effort from Lucasfilm Games – the people who brought you Monkey Island, but not its sequel. Grrr. Anyway, cheers to Jaz and here's the solution. Oh, and Indiana Jones has just been re-released on the Kixx label at the super soaraway budget price of £14.99.

Barnett college, 1938

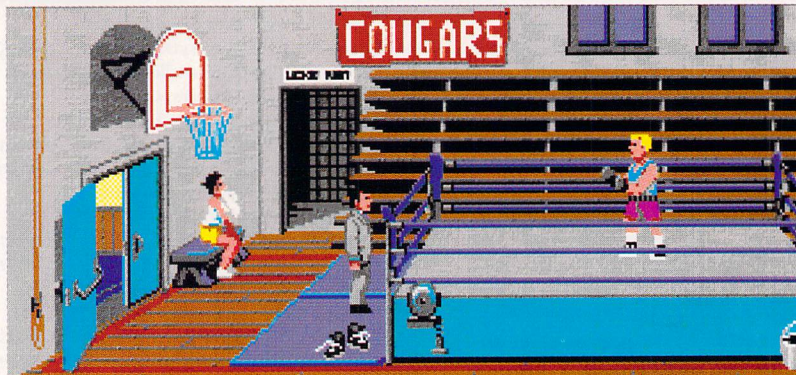
Meet the prof and then go and change your clothes. Now exit from here and follow the two guys to Donovan's. Sit around and join in the rendition of *Mellow Yellow*, but don't sing *Sunshine Superman*. Have a natter with him and then return. Next, go to Henry's house and head over to the bookcase. Push it, examine the tiny spot and pick up the sticky tape. Go into the bedroom and get the picture. Now head back to the college and the gym – remember to talk nicely to the students. Don't make any rude jokes about their cardigans, or the fact that they're all in the Anarchy Society and

think it's very clever to have no leader, no structure, no meetings and lay in bed all day.

You find yourself in a room where your trophies are kept. Look for a storage bin which is between two windows. Search the bin to find a jar of solvent and place the sticky tape into the liquid. While you're here, look on the left to come across a small package. Here you find the Grail Diary, without it you are lost. To avoid the students, leave through the window and throw the crisp sandwich. Now go back to Henry's and pick up both the plant and the tablecloth. Examine the chest, then use the key to unlock it. Look inside and get the old book. Exit the house and travel to Venice.

Venice

Once Dr Sneider has left, you head back to the pub. Walk to the back where the two lovers are and examine the wine bottle. Pick up the bottle and go to the fountain. Use the bottle in – or on – the fountain and walk to the library. Now you have some important reading to do. There are three books you are looking for. Use the What Is command to find them. You need *Kampf*, *How To Fly A Biplane* and *Secrets Of The Roman Catacombs*. When the response changes from "books" to "book," you know you have found one of the books required. Locate and get the red cord, plus the metal post. Look in the diary and you see a picture with a cryptic note – these change from game to game. Make a note of the



■ "Come and have a go if you think you're hard enough." "Er, I'm sorry. I'm an internationally renowned archaeologist, not a street brawler." "Well, excuse me!"

window and the message. Now go and find the exact book in the library. Look at the inscription on the pillar – there are three Roman numerals on it. Make a note of the numeral which corresponds to the one in the diary. Head over to the slab and climb in the hole.

Roman catacombs

You are now in a room with three exits. If not, climb back up and try again. Look at the catacomb book, then exit through one of the doors and walk until you see a room with two skeletons on the eastern wall. Look at the skeleton on the right, take the hook on his arm and keep going. Find a room with a torch in it. Use the wine bottle on the torch, then pull the torch. Now find your way across a stone bridge. Use the hook on the wooden plug. Use the whip on the

hook. Not far from here you can find a room with a ladder in it.

Climb up, return to where the plug was and walk to the door on the right. You now find a strange machine. Use the red cord on machine and turn it on by using the wheel on your right. Also, look for another room which has three gold statues near a door. Look at your diary again and push the statues until they are in the correct order. The door now opens for you. Enter and you see a narrow stone bridge. This would have been up if you had not turned on the machine.

Go over the bridge and enter the tunnel on the side of it. You now find a room with a chest and some skulls on it, plus a wooden door. Look at the diary and push the skulls in the correct order. Don't forget that his left is your right. After the door opens, enter and head for the room with the coffin. Open it, look inside the coffin. Leave here and go back into the room where the manhole was. Climb up ladder and head off towards Brunwald castle.

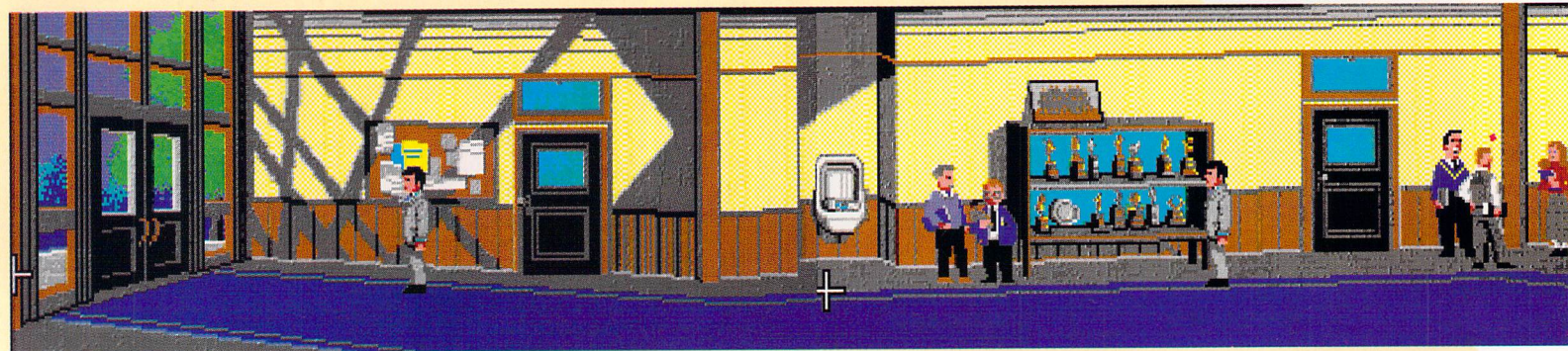
Brunwald castle

Enter the castle and knock out the butler. Head north, find the drunken soldier. Talk kindly to him and offer to get him another drink. Get his stein, head for the room with the burning fire and the keg of beer. Use the stein with the spigot and, once the steam from the fire has finished, get the roast boar and leave the room.

Now head back to the entrance of the castle, give the stein to the first



■ "Please, sir, can we have Dr Jones' autograph?" "Think you're special do you, Ronson? Think you're different from the rest of us?" "No, sir." "Well, I think you are, actually. What are you doing tonight?"



■ **The college.** The Old English architecture betrays an idyllic ambience of academic excellence. Great-looking trees, too.



guard and enter the door. Get the servant's uniform and leave. Nearby is a room with a fireplace, find it and push the first statue. This shows a hidden passage. Make a note of this for later. Close it again and exit the room. Say to the second guard that you are selling fine leather jackets and that you have authorisation. Sell the jacket to him for 15 marks. Walk up to the steps and find a room with a chest in it. Open the chest and look in it to find another 50 marks. Put on the servant's uniform and leave the room.

Give the painting found in Henry's house to guard number three. Go east and you find another room with a small chest in it. Open chest, look in chest, get uniform, examine uniform to find a key. Put on your Indywear, exit room, head back down the stairs to where you found the servant's uniform. Now, use the brass key in the clothes lock and pick up the grey uniform that's there.

Enter Room One and fight guard number four – this poses no great problem as south from here is a first-aid kit. Exit room, apply the first-aid and head upstairs. You need to insult another guard to get past. Do this until he lets you pass, then go through Door One. Throw the roast boar to the dog, take the trophy, open the door and get the pass.

Change back into the Indywear and go back downstairs into the kitchen. Fill the trophy with beer from the keg, change back into the grey uniform, go upstairs and give the trophy to Bif. He hits himself with the trophy, because he is rather stupid. All you have to do is give him one punch to finish him off. Then go and punch out guard number two, look through

the window, get the silver key – which is hanging from the candelabra – and use it in Door Three. The alarm goes off. Enter the room. If the room has a cabinet in it, open it to get 75 marks. If not, look to your left or right to find it, then exit the room and give the Grail Diary to Vogel.

You now find yourself tied to a chair with Henry. *Save the game.* You can push or pull the chairs you are seated on – keep pushing until you have the chairs under the suit of armour. When satisfied, push the suit. You should now be free. Then push the statue on the left of the fireplace. The hidden passage is revealed again. Enter it and you are now outside. Walk over to the motorcycle with the sidecar, get in and use it.

On the way to Berlin you are stopped at a checkpoint. To get past, say that it is out of the question and that the only papers you can find are the marks. Hand over the money. When you arrive in Berlin, Elsa gives you the diary back. When you come across Hitler, give him the pass. He signs it for you. Time to head for the airport.

The airport

When you get to the airport, you find that you don't have enough money to buy tickets, so get Henry to go over to the man with the blue coat and ask him about his grandchildren. Then pick the man's pockets. Exit here and board the zeppelin. Because there are heaps of guests on it you find it a bit tough, so go outside and steal a biplane. Get in, push all the switches up,

move the dial to B, click on the tank indicator until it goes green, pull out the T lever and the black knob three times. Finally, push the red starter button. Shortly after take-off, you are shot down. You crash-land on a farm. Go over and use the car on the left. Show the border guards the pass which Hitler signed. Carry on to Iskanderun where the Holy Grail is located.

The temple

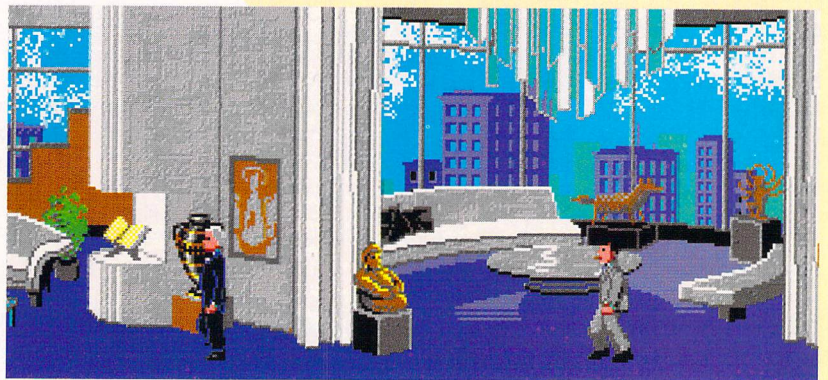
Save the game. Enter the temple and get ready to be tested. To pass the first test, look in the Grail Diary. Locate the picture with the "X" in it and click the cursor on the same place as the "X" in the game. Next, look at the top of the screen and note how God is spelt. If it says "Jehova," you can walk on the initial letters. Next, position the cursor at a point on the other side of the chasm. If you choose the wrong spot, then you die. The final test is to choose the correct Grail. Use the information you obtained earlier. Once you've chosen a Grail, take it over to the holy water and fill it.

Now your father is safe, get the Grail and give it to the knight. Now leave. Next – hang on, you've done it. Good.

WANTED

Your tips, cheats, hints, complete solutions and other related items of wonderment. Specifically, we need complete solutions for *Ishar*, *Wizkid*, *Elvira 2* and loads and loads of level-codes for *Lemmings*. No! That was a joke. We don't require level-codes of any description or solutions to *Monkey Island* and *Another World*. A few tips for *Crazy Cars 3* would be good, though. To claim your £25 reward send your tips into Gamebusters, ST FORMAT, 30 Monmouth Street, Bath, Avon BA1 2BW.

Andy Lowe's recent desertion to *Games Master* means, that from next month, Rob "Milky Milky" Mead is going to be your new Gamebusters host.



■ "Well, Dr Jones. It has panoramic views of, er, the river, the sausage factory and the industrial complex." "I'll take it. Is the furniture included?" "Ah, no." "What else is included?" "Well, not the apartment, obviously. Er, in fact, the only thing included is the collection of rusty old coins behind the sofa." "Ah..."

■ Dewy-eyed for his own heady days at college, Dr Jones wanders around the corridors and reminisces about his old flames, his lecture notes and that night when he stayed up until 4am, watching videos. What an anarchist.



ULTIMA 6

Mindscape



In your world, five seasons have passed since our triumphant homecoming from Britannia.

It looks like a role-playing special this month. So, to round it all off, here's some almost effervescently useful tips on this excellent RPG from the marvellously named Patrick Lowe of Derby. Ta very much. Now, get on with it...

- 1** Find the shrine of singularity in the mountains north of the stone table. When you're on the Gargoyles island, use your balloon.
- 2** Find the violet lens in the largest building on the Gargoyles island.
- 3** To get into the thieves guild, either pickpocket Homer or Phoenix – the lady under Britain who has several glass swords, magic helms, and so on. Ask Homer about the pirate's treasure. To find this treasure, you must enter two of the three hardest dungeons, Destard and the Pirate's Cave. Invisibility spells make Destard easier. In the Pirate's Cave, constant healing helps. Phew! This is complicated. Are you managing to follow it all so far? Hmm.
- 4** Go as far to the left as you can on Level One, enter the maze and explore the "off limits."

Ignore the first clouds and you should find the treasure.

- 5** Captain John is at the bottom of Hythloth, which is better accessed from the far south-east of the Gargoyles world. Learn to speak Gargoyles and join with Beh Lem. This makes more and more sense the further you go, doesn't it?
- 6** Most dungeons are marked on the map. You just have to look harder for them.
- 7** If you become frustrated at any point, talk to Iolo. Ask him three times about spam. Then ask about humbug. Break into a rendition of the *Spam Song* and, if you feel particularly jovial, have a go at the *Argument Sketch*.
- 8** For an interesting discourse, talk to the gypsy's dog and say "Speak."
- 9** The Wizard of Oz can be found in the catacombs under the Lyceum. If you retrieve this book and give it to Lord British, he gives you loads of gems.
- 10** Also under the Lyceum is the book of lost mantras.
- 11** The glass sword hits for 255 points of damage and kills a Gargoyles instantly. If you don't believe it, ask your mother.



"There's nothing on, is there? There's just nothing ever on. These gadgets have no soul. I want some meaning. A natural force of great beauty and wonder. Then again, I might just nip down to the chippy..."

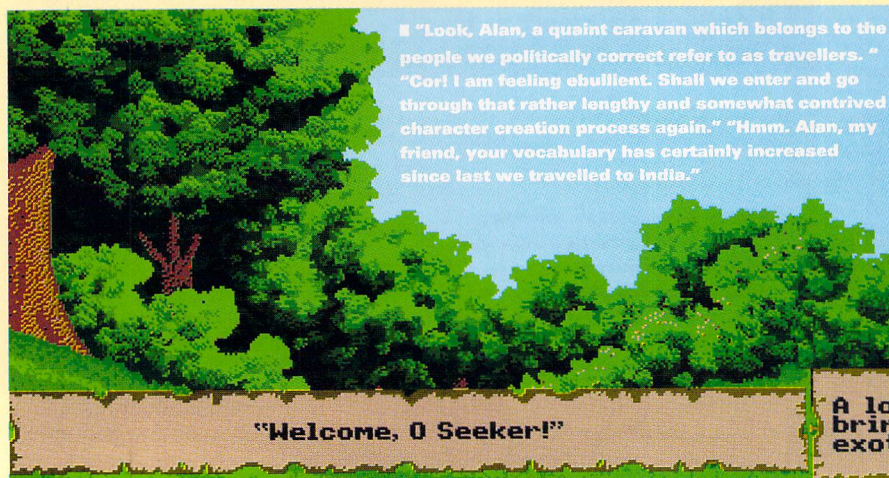
Outside, a chill wind rises...

- 12** You need to get the boat of the humblest man in New Magincia if you are to reach the Avatar's Shrine.
- 13** In the bank in Britain, you can find 2,400 gold pieces in magically locked chests.
- 14** In the village of Britain you can obtain a magic bow without spending any money. Talk to an NPC.
- 15** You can find one NPC and a magical helmet in Trinsic, as well as a glass sword. Now come on, this is silly...
- 16** On Britain, ask Gwynneth about the triple crossbow.
- 17** There is an egg room with dragon's eggs on the fourth level of Destard, north of Trinsic.
- 18** In the serpent's hold, there is a building to the far west of the city. In a secret northern room there is a triple crossbow.
- 19** To get into Sutek's castle, bash down the iron door. This needs lots of attacks. To lower the draw-bridge, cast telekinesis on the crank.
- 20** In the catacombs of Sutek's castle, you find the body of a balloonist. Search him for instructions on how to make a balloon.

- 21** In buccaneer's den, talk to Homer. His information on Captain John's treasure is vital to the quest.
- 22** Magic fans are important. They change the wind's direction.
- 23** The storm cloak dispels all uses of magic when it is readied. Brilliant, eh?
- 24** When talking to Budo, on Buccaneers Isle, say "Guild."
- 25** In Trinsic, Sandy can tell you more about the pieces of map in return for a dragon's egg. Right, that's enough, this has got way too silly.



"OK now, pay attention. Bottle, glass, glass, bottle. Did you see that? No? OK. Just like that. Glass, bottle, bottle, glass. Look, I'm not doing this twice. No magician does his trick twice. It ruins the effect." "Oh, why can't you shut up?"



"Look, Alan, a quaint caravan which belongs to the people we politically correct refer to as travellers." "Cor! I am feeling ebullient. Shall we enter and go through that rather lengthy and somewhat contrived character creation process again." "Hmm. Alan, my friend, your vocabulary has certainly increased since last we travelled to India."

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To avoid any possible disappointment, please note that these are not "arcade" games, but realistic simulations. There are no flashy graphics, though most do show a track plan on the screen; the emphasis is on providing you with sufficient information to make the right decisions.

NEW! Bristol 1990 - Frequent Regional Railways services between Cardiff and Portsmouth; Inter-City services from Paddington and between the South-West and North-East; local services to Weston, Taunton and Gloucester; occasional Regional Railways services to Southampton, Weymouth and Exeter; parcels traffic and some freight workings; engines and units visiting Bath Road depot for servicing or refuelling. **£15.95**

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NEW! Tehachapi 1927 - Steam operation on this Southern Pacific / Santa Fe joint line (see above). At this time there was even less double track, and almost all trains required helpers, often two. Passenger operations complicate your task. **£15.95**

Special Offer! Both Tehachapi simulations described above for just **£23.95**, saving **£7.95!**

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Many other railway games available - please send SAE for complete list.



SIAM Ltd. (Dept. ST12), 1 St. David's Close, Leverstock Green, Hemel Hempstead, Herts. HP3 8LU

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Easy to use interface produces a fast paced game with the need to change army orders only when the player deems necessary. Written by Ken Wright, the most prolific author of strategy war games.

Cheques made payable to K.W. Software, 155 Ringinglow Road, Sheffield S11 7PS

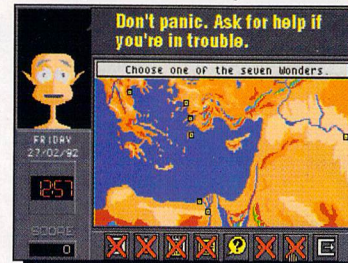
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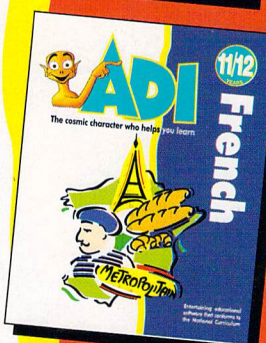
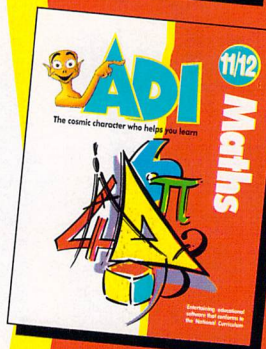
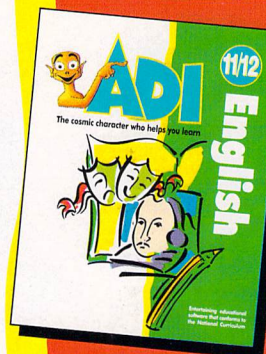
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ISSUE 40

November 1992
Disk: *Trip-A-Tron*, the powerful light synthesizer, *Cybernetix*, *Talespin*, the interactive adventure creator.
Inside: Battlemania, samples roundup, Lynx games roundup, interview with Archer Maclean, movers and shakers in the ST world.



ISSUE 39

October 1992
Disk: *Magic Story Book*, *Captain Dynamo*, multi format slideshow; *Pack Ice*; *Pro 12* sequencer;
Inside: Sequencer roundup; make some noise feature; hard drive roundup, DTP masterclass. We ask Are Games Too Hard?



ISSUE 38

September 1992
Two Disks: *Spectrum 512*, *Spec Code*, *Sensible Soccer* demo, *Mapper 2*
Inside: Get closer to your ST with *Summer School*, *Falcon* and *Mega STes* investigated, *STOS* tutorial, getting professional with MIDI music



ISSUE 37

August 1992
Two Disks: *STOS Basic* language and *Animaster* sprite designer, *International Sports Challenge* demo, 3D Picture modelling package
Inside: How to create great games, monitor roundup, *Calamus SL* reviewed and rated



ISSUE 36

July 1992
Two Disks: *K-Spread* 2 spreadsheet package; *Fire and Ice* demo, *Super Boot 7.4*, *The Financier* money manager, and more
Inside: 50 ways to soup up your ST; what happened to the games heroes of yesterday? HP inkjet printer review



ISSUE 35

June 1992
Two Disks: *GFA Basic v3.5*, *GFA Assembler*, *GFA Raytrace* complete; *Pacific Islands* demo, complete database and astrology programs, and much more
Inside: upgrades step-by-step; ST astrology; program fractals



ISSUE 34

May 1992
Two Disks: *GFA Draft Plus 3* complete 2D vector drawing package; *Campaign* demo; *Intro Designer*; six more full programs
Inside: 21 pages of art guides; ST Book portable tested; weird games; 120 tips; Buyer's Guide



ISSUE 33

April 1992
Two Disks: *Write On* package; *Leander* preview; two raytracing programs; complete *Penguin* game; fractals and more!
Inside: Over 20 pages of all sorts of tips; complete guide to raytracing; get the best from *Sequencer One*



ISSUE 32

March 1992
Disk: *Knightmare* demo; *Kozmic* pattern generator – exclusive; *STOS* extension and more!
Inside: Find out how you can make money with your ST; reviews of *STOS 3D* and *Timeworks 2*; over 40 ST tips!



ISSUE 31

February 1992
Disk: *Stereo Master* preview; *Start here!*
Inside: You need to know to get started with the ST; roundups of top software, games and add-ons; inside your STE, assembly language programming



ISSUE 30

January 1992
Two Disks: complete *Soundscape* package; *Light* and *Baby* demos; and more
Inside: Being creative on your ST – desktop publishing, programming, graphics and music; high res games



ISSUE 29

December 1991
Disk: *Autoplay* intro sequence creator; *Daylight Robbery* and *Stereo Replay* demos
Inside: Making your own intros; score-writing packages; ST-related book roundup; *Band in a Box* and other packages reviewed and rated

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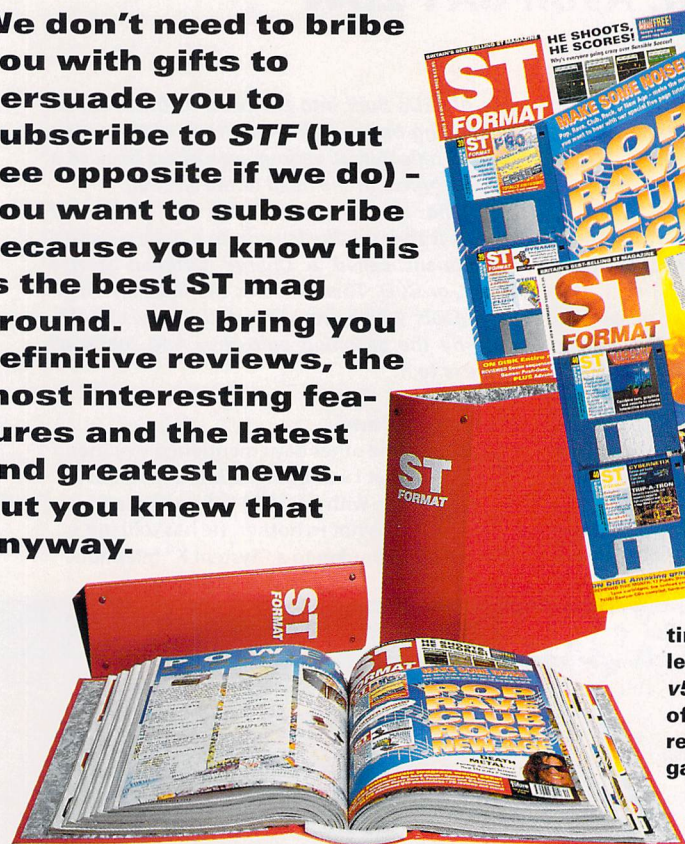
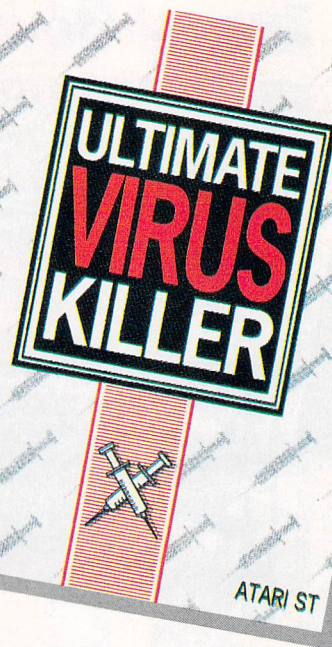
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Brains and the rest of the International Rescue squad are here this month, ready to come to your aid at a moment's notice. Clive "Yes, m'lady" Parker dives headfirst into the mailbag and sorts out those tricky technical problems. Write to ST Answers, ST FORMAT, 30 Monmouth Street, Bath, Avon BA1 2BW

THE ICONS

BEGINNERS



Have you just bought an ST? Then turn to the bits with this icon for sound, no-nonsense advice.

COMMS



If you talk through your monitor - and some people can - check this out for help with those comms.

DISKS



Whether your disks are floppy or hard, this is the spot for you. We solve your disk problems here.

GAMES



Oi! If you want to cheat then read the Gamebusters pages. This section is for serious traumas only.

GRAPHICS



If you can't tell a pixel from a palette you've come to the right place. Budding Picassos start here.

HARD DRIVES



The harder they come, the tougher they fall. Our resident doctor puts a plaster on the sore parts.

PRINTERS



Do your characters print backwards? Having trouble with your sheetfeeder? Turn to this pic for help.

PROGRAMMING



Getting your calls confused? Get 'em sorted with this month's STOS and assembly tips.

SOUND



Does your MIDI setup sound like Kylie at 16rpm? Just read this and take those earplugs out.

ST PROBLEMS



This icon is for all other bits that have nowhere left to turn. We can help give them some pointers.

Simple scanning



What are hand scanners and how do they work?

Mark Herbert, Bristol

stf: That's what we like, the simple stuff. There are two ways to answer this question: the easy way and the techie way.

1. A scanner is a small device that plugs into the cartridge port of the ST and enables you to copy pictures from paper and photographs and convert them to a computer image.

2. Hand scanners are opto-mechanical devices which contain many electronic components crunched down and combined into a single chip. This chip is called a gate array. When a scanner is activated and moved over a drawing or a picture, light shines on to the paper from a

line of LEDs built into the head of the scanner. Depending on the colour and tone of the paper, light is reflected at various intensities back to a convex mirror in the head of the scanner.

The mirror concentrates the light and directs it through the lens on to a light sensitive component called a Charge Coupled Device Array, or CCD. This converts the light into digital signals which are converted to a visual display by the scanning software. And that's all there is to it.

Fantasy island



The other day I mentioned to a friend that I was going to buy a modem for use with my 1040 STE and his advice was not to bother. He has told me that we are changing to a "System X" telephone



STOS CORNER

More of your STOS queries answered by Billy Allan

A changing environment

Please can you tell me what the ENV command is for since I can't find it in the STOS manual? Also, why don't the STE or Misty extensions work in high res?

Mark Westguard, Johnshawen

stf: As far as we know, changing the screen colours is all the ENV command does. Neither the STE commands or Misty work in high res because the authors of these programs don't have mono monitors and so could not test mono commands.

We want information

I am writing a disk copier in STOS and want to know 1. How can I check the disk format (for example, how many tracks there are) and 2. How to format individual tracks with the Format program from the STOS compiler.

Jill Markham, Woodley

stf: 1. The format information is stored in the bootsector of the disk, which is the first sector of track zero on side zero. This routine can give you the required information - note that the \J signs means no line return yet; the line just wouldn't fit in our narrow columns.

```
10 reserve as work 10,1024
20 DRV=drive : floprd\J
   start(10),1,0,0,1,DRV
```

```
30 S10=start(10) : poke S10,peek(S10+20)
40 poke S10+1,peek(S10+19)
50 NUMSEC=deek(S10)
60 SECTRK=peek(S10+24)
70 NSIDE=peek(S10+26)
80 NTRAK=(NUMSEC/NSIDE)/SECTRK
90 print "Total sectors =";NUMSEC
100 print "Sectors/track =";SECTRK
110 print "Sides =";NSIDE
120 print "Tracks =";NTRAK
```

2. You can't. It only formats disks from track zero to a given number and automatically installs the bootsector. You have to access the XBIOS function flopfmt() yourself.

Short of memory

Every time I try to load the droid sprite files, the sprite editor crashes and says "Not enough memory." Do you think I need to upgrade my 520 STFM?

Nicky Haley, Milton Keynes

stf: You can only load these files on an ST with 0.5MByte of RAM if you have TOS 1.0 installed. This is because later versions of TOS are larger and occupy 32K more RAM space, leaving less room free for programs. It would be worth your while getting a memory upgrade since they can cost as little as £40 for the STFM. We have a 2.5MByte memory upgrade on our development machine and we usually have the STOS compiler located in a RAMdisk; we can then compile a STOS Basic file to GEM in seconds.

exchange which will enable me to plug my STE directly into the phone socket.

Could you let me know what cable and software I need to connect my machine up? I have not heard of this system before but my friend is an electronics lecturer and has a Masters Degree in Science, so he must know what he is talking about.

G F Boote, Lancs

stf: Just because someone has an MSc does not mean that he is necessarily sane or has a complete set of The Home Computer Course tucked away. Most of the people who work on STF have degrees and it doesn't mean a bean.

At the moment the only way a standard computer can interface with a telephone line is by means of hardware, most commonly a modem. Some more advanced machines with extra hardware – such as the Falcon with its DSP56001 processor – can interface with the telephone lines just using a software modem. This is not possible with the 1040 STE no matter what kind of exchange is installed by BT because it just does not have the hardware to process this kind of data.

Newcomers' corner



1 My friend has a 1040 ST for sale for £150. Should I get the memory checked to make sure that it is OK and worth the money?

2 Can I play games on a 1040 ST?



STF GOES ON-LINE

Chris Dammers from Cobham wants to know if there are any BBSs that support the Atari ST. Here is a short list of some popular boards, all of which have large ST areas and lively message bases.

Ad Lib 2 BBS 24 hours ☎ 0454 317047
Ad Lib BBS 24hours ☎ 091 370 2659
Bath BBS 24 hours ☎ 0225 840060
The Bull Ring BBS 9pm - 8am ☎ 021 773 4156
The Vault BBS 9pm - 9am ☎ 0726 84900

3 What is an HD?

4 What are the best flight simulator and football management games available for the ST?

Michael Jones, Herts

stf: 1. The chances are that, if the machine works at all, the memory is fine because 1040 STs have their memory installed at the factory. If you can run software without problems, don't worry. £150 is a reasonable price for a second-hand 1MByte machine.

2. Yes, you can play games on a 1040 – in fact, many games are better on a 1040 machine because they can load in extra graphics and sound effects.

3. An HD usually refers to a hard drive – this is a hardware device that can store many times more information than a floppy disk, typically

ST FORMAT BBS 24 hours ☎ 0225 461330
Yes, that's right. The ST FORMAT BBS is now operating 24 hours a day on ☎ 0225 461330 at 9,600 baud under the expert guidance of our Tech Ed Clive Parker – having drawn the short straw – in charge. You can log on to chat about ST subjects, the Falcon030, programming, graphics or whatever you like. You can leave your ST Answers queries, Feedback letters or general views about the magazine, Atari, life or anything ST related. So get those modems beeping and call the ST FORMAT BBS.

30 to 100 times as much. Hard drives are also much faster at loading and saving data than floppies, but are also much more expensive. Hard drives are used mainly for "serious" computing purposes but they are dropping in price all the time – a 30MByte drive can now be obtained for £239 from First Choice Computers on ☎ 0532 319444.

4. Our games guru, Andy Lowe, recommends both F-19 Stealth Fighter from MicroProse and Thunderhawk from Core Design if you want action-packed flight and fight simulators. Championship Manager from Domark is being reviewed in issue 42 of STF, barring unnaturally sunny days or other circumstances beyond our control. It looks as if it's going to be a blast.

Extend yourself

1. Is there a book available on writing STOS extensions?

2. Where can I get STOS extensions from?

3. Is it worth getting STOS Maestro Plus?

John Rice, Leeds

stf: 1. We learned STOS extensions from the Game Makers Manual from Sigma Press (☎ 0625 531035 £12.95). However, you need a fair understanding of assembly language before you can create extensions.

2. Most good PD libraries stock these extensions. Try Goodman's International on ☎ 0782 335650.

3. It all depends on what you need – Maestro is useful because it's specifically created for STOS and comes with the Maestro extension, however, it doesn't have the features of samplers like Stereo Master which gives stereo sampling.

Perfect timing

I am writing a timing program in STOS Basic where I wanted to show large numbers and letters on the screen. I found that the large character set in STOS is very blocky and sprites take too long to display – I need to be able to show times in hundredths of a second intervals. Can you help?

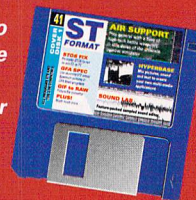
Bill Giggie, Dublin

stf: If you want to count in hundredths of a second, then the SKOPY command from the Misty extension (on ST FORMAT Cover Disk

38) is the only command which enables you to draw up large characters in such a short space of time.

Try the following routine if you have your numbers as a 64 x 64 sprite bank:

```
10 mode 0 : key off : curs off :  
   hide on : mouseoff  
20 reserve as screen 10 :  
   dim ADR(9),TM(3)  
30 BP=0 : X=0 : Y=0  
40 for T=0 to 9  
50 sprite 1,0,0,T+1 : update  
60 ADR(T)=BP+(X/2)+(Y*160)  
70 skopy 1,logic,0,0,64,64,  
   start(10)+ADR(T),0,0  
80 BP=BP+2 : if BP>6 then BP=0 :  
   X=X+64 : if X>256 then X=0 : Y=Y+64  
90 next T  
100 sprite off : update  
110 for T=0 to 3 : TM(T)=0 : next T  
120 logic=back  
130 repeat  
140 for Q=0 to 3  
150 skopy 1,start(10)+ADR(TM(Q)),  
   0,0,64,64,logic,Q*64,0  
160 next Q  
170 TM(3)=TM(3)+2 : if TM(3)>9  
   then TM(3)=0 : inc TM(2) :  
   if TM(2)>9 then TM(2)=0 :  
   inc TM(1) : if TM(1)>9 then  
   TM(1)=0 : inc TM(0) :  
   if TM(0)>5 then TM(0)=0  
180 screen swap : wait vbl  
190 until inkey$=""
```



Sprite-tastic tip

The basic principle of fast sprites on-screen is called "pre-shifting." It works like this: instead of having just one image of a sprite and scrolling it around before putting it on the screen as the

normal SPRITE command does, we hold 16 images in memory and each one is scrolled to the right of the last. This means that you can place the correct image immediately without any time-consuming scrolling to get through first.

Unfortunately, holding 16 images of a sprite takes up a lot of memory. Therefore we sometimes hold eight, four or even just two images of the sprite and round off the screen co-ordinates to the nearest two, four or eight.

To calculate which image to put on the screen you have to divide your coordinate by 16; the remainder is the correct image number. STOS has a command to do this called MOD. So, for instance, "165 MOD 16" returns a value of five and "18 MOD 16" returns a value of two.

It is usually best to use the SCREEN\$ command to draw the sprites rather than SPRITE. This is because SCREEN\$ is much faster and it doesn't slow down when two sprites are on top of each other.

On this month's Cover Disk are some example BASIC files for you to experiment with. They show the basic techniques of "pre-shifting" and also how to simulate the various STOS commands like MOVE and COLLIDE.



MUSIC AND MIDI

Tim Tucker answers your soundwise queries...

Making connections

I have a Yamaha PSS 780 keyboard, an Atari ST 1040, a STOS Maestro sampler and a MIDI system. How can I connect all this up – and what equipment do I need – to combine music from my keyboard with stereo samples on to a cassette?

I have also been trying to create the now compulsory "THUMP THUMP THUMP" bass drum sound you hear in rave records. My keyboard gives off a "TAP TAP TAP" sound which is no good. I sampled a bass drum sound on the STOS Maestro sampler, but can't get it to thump in time with my music. Is there a program I can buy that enables you to set the beat to play at a programmable speed?

Tom Muschamp, Avon

stf: If you want to combine sounds from your keyboard and your ST, you need a mixer of some sort. The best thing to go for is a four-track cassette recorder which has a small mixing desk built-in. Fostex (☎ 081 893 5111) do a range of budget four-track machines – the X-28 is a good lower price model at £339, because it provides eight channel inputs which you're likely to need if you expand your system. If you find these are too expensive for your budget, try the second hand market.

A mixer gives you multiple inputs which are mixed together and recorded to tape, and are also sent out of the stereo output of the mixer. You connect the jack output from your keyboard to a channel of the mixer. For the ST you need two leads with phono plugs on one end and quarter inch jacks on the other. You then take the audio outputs from your ST to

individual channels on the mixer, panning them left and right respectively. You need to connect the stereo output from the four track to the aux, tape or CD input of the amplifier on your hi-fi to hear the sounds coming through your speakers. Alternatively, you could plug headphones into the headphone socket of the mixer.

If you want to use samples in time with your music, you should be using a sequencer program which plays sampled sounds from the program.

If what you're using can't do this, take a look at Sequencer One Plus (Gajits ☎ 061 236 2515 £129.95). If you already own Sequencer One you can upgrade through ST FORMAT for only £39.95 (see Mail Order on page 128). This loads .SAM samples (the format which STOS Maestro uses) directly into it and you can then play them from your MIDI keyboard and record them into

their own sequences, running alongside the MIDI sequences you record.

Going Thru with it

We have a problem with Pro 12 which was on the cover of STF 39. We have a setup of a 1040 STEM with a Yamaha DX7II and a Boss DR-550 drum machine. The drum machine is connected to the DX7 by the Thru port (the drum machine only has an Out port). The DX7 is connected to the ST by the In and Out ports.

The problem is that the drum machine does not come through on to the ST, but the DX7 works fine. Can you help?

Tim Waltho and Peter Dutton, Stafford

stf: The MIDI port on the DR-550 is actually an In port, not an Out. You have your equipment connected correctly, but you cannot send MIDI information out of the



ASSEMBLY POINTERS

Your assembly language problems solved by programming guru Tony Wagstaff

Right on time

I am writing a MIDI sequencing program and would like to use the MFP User Timer.

A Graves, Cambridgeshire

stf: The User Timer, or Timer A, can be used to control the playback of samples. The Timer itself is programmed with the Xbtimer call:-

```
ISRA equ $FFFFFA0F
move.l    #routine, 1
    -(sp)
move.w    #data, -(sp)
move.w    #control, 1
    -(sp)
move.w    #0, -(sp) 1
    *0=Timer A
move.w    #31, -(sp)
trap      #14
lea 12(sp), sp
```

* your routine goes here

```
bclr.b    #5, (ISRA).w
rte
```

For our purposes #control needs to be set to eight, signifying that we want Event Count Mode. What

now happens is that the Timer counts down from the number given as #data each time it receives an "event." Once it reaches zero it runs the routine in supervisor mode, the last two lines of which tell the ST that the timer has finished.

Actually playing the samples is the responsibility of the DMA sound chip which, after each sample has played, also sends the event that triggers Timer A's countdown. Load your sample into memory, change up to supervisor mode, and move the address of the sample into the DMA registers as follows: d3 and d4 both contain the address:-

```
lsl.l     #8, d3
move.b    d3, $ffff8905
lsl.l     #8, d3
move.b    d3, $ffff8903
move.b    d4, $ffff8907
```

Move the address just beyond the end of the sample into FFFF8911, FFFF890F, AND FFFF8913 in the same way.

Set the low byte of the sound control register at FFFF8900.w to three, and the sample repeats while Timer A counts down at the end of each repeat. Got that? All this goes on

in the background while your program is completing other chores. The bottom two bits at FFFF8920.w set the frequency, starting at 6258 Hz, while bit 7 is 0 for stereo, 1 for mono.

The trick is to use the Timer A routine to reset both itself and the DMA registers. For instance, suppose you have two samples, and wish to play the first sample five times and the second eight times. Load the samples into memory and set the DMA register to repeat the first. Set the Timer A with #4 as data, (that is, 5-1, since the first repeat is already playing).

You might then program the routine to set a flag while the main program continues with other business, periodically checking the flag. When the sample finishes its fourth repeat, the routine is run, setting the flag. The main program spots this, resets the DMA with the address of the second sample and calls Xbtimer with data which is this time set to #8. When the main program spots the flag for the second time, it sets the low byte of the the sound control register to one to inform the DMA to stop at the end of this repeat, and calls Xbtimer once again with #control set to zero to switch the timer off.

Index-linked tip

A useful tip if you need a fast method of accessing data is to use the "rs" directive, partner to the more commonly seen "ds." Unlike the latter instruction, rs is not given any actual memory space. Instead, it defines where a particular piece of data is within a list of data. So:

```
rsreset
top rs.l      1
var1 rs.b     1
var2 rs.w     1
flag rs.b     1
BSS
store ds.b    8
```

automatically gives "var1" the value of four, since "top" is long and so uses four bytes. Rsreset sets the counter to zero, so that "top" has the value 0. To retrieve your data, load an address register with the address of "store," and use the rs labels as an index, thus:-

```
move.l     #store, a6
move.b     var1(a6), d0
```

The second instruction is faster than accessing data directly as in:

```
move.b     var1, d0
```


drum machine to record on the sequencer.

You can record your drum machine parts using the DX7 keyboard to trigger the sounds. Turn the Local off on the DX7 so that the keyboard is only sending notes over MIDI and not triggering its own sounds. Set the MIDI receive channel on the DR-550 (channel 10 is most commonly used for drum sounds), then set the track you're recording to on Pro 12 to the same channel using the MIDI box. Record your performance as usual.

Getting to the sounds

I have recently bought the Roland CM-32L LA sound module and a Roland PC-200 master keyboard. Is it possible, using a "patch editor" and "librarian," to change the CM-32L's internal sounds?

I've seen editors and librarians for the MT-32 and the manual says the CM-32L can use the same

applications as the MT-32, so I was wondering whether or not to buy the MT-32 software from the Public Domain library MT Software. Please help!

Alex Gutteridge, Islington

stf: The CM-32L is basically an MT-32 in a different box, and consequently you can use any software for the MT-32 with it.

Carlsbro Retail Limited in Leicester sell Steinberg's Synth Works Editor for the MT-32 for £29 – a real bargain. You can contact them on ☎ 0533 624183.

Put it on the stove

Is there a music program from the Public Domain with which I can put notes on a stove and then enable my ST to play them back using its sound chip – that is not via a MIDI output? I am particularly interested in being able to do this with drum music.

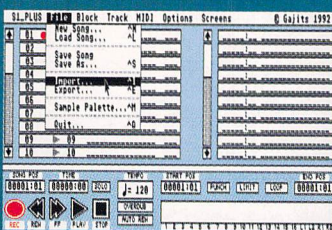
P Ramsay, Kent

stf: Sound Machine is a three channel tracker that uses standard musical notation. You can order it quoting disk number 958 from Riverdene PDL, and you can contact them on ☎ 0734 452416.

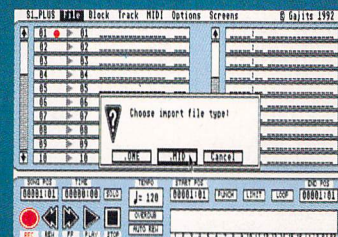
MIDI files

Having upgraded to Sequencer One Plus, I attempted to load the *.MID files from Cover Disk 39. Sequencer One baulked at this and Pro 12 crashed outright. How are they meant to be used?

Steve Watson, London



■ To load MIDI files into Sequencer One Plus, first you have to choose Import from the File menu.



■ Next just click on the .MID box and choose the file you want to play with in the file requester.

stf: The .MID files are standard MIDI files rather than Sequencer One files.

In the file menu, choose "Import," and, when you can see the requester, click on the .MID box. This loads the files correctly so that you can use them without any problems. Unfortunately, Pro 12 doesn't accept .MID files, so you can't load them in there – but you can use them in any other program that accepts standard MIDI files.

Many programs have one address register permanently loaded with the address of all their data, and access it in this way. It is also very useful if you are fond of using structures such as those that are found in C.

Using the above example, if we had 200 records of this type and wanted to access var1 in the fifth record, then the following would do the job OK:-

```
move.w    #5-1,d2
mulu.w    #8,d2
*each record is 8 bytes
move.b
var1(a6,d2.w),d0
BSS
store ds.b 8*200
```

Hot Keys

I have managed to install a Terminate and Stay Resident (TSR) program into the screen-dump vector so it pops up when I press <Alternate>-<Help>. How can I get it to work with other hot keys? How could this program check which BIOS calls are being used, as in the SYSMON program that appeared on Cover Disk 27?

Michael Beasley, Avon

stf: Checking what the BIOS is up to involves redirecting the trap to

your own routine or handler. The listing below shows how to install this as part of a TSR.

The first four lines set up what is known as the Xbra protocol, which, if every program was to use it as necessary, would enable you to check what other handlers have been installed simply by looking at the handler's address minus 12. If this contains the letters XBRA, then the address minus four contains the address of the previous handler. This, in turn, can be checked in the same way.

Replacing the four asterisks with four characters of your own enables you to check that your routine isn't already there – in case you run your program twice, for instance.

You should definitely do this if you are installed as an Accessory. The remainder of the listing deals with such problems as the traps being handled differently on different machines, and how they are handled when in user or supervisor mode.

```
l_frame equ    $59E
move.l      #my_trap,-(sp)
move.w      #45,-(sp)
move.w      #5,-(sp)
```

```
trap        #13
addq.l      #8,sp
move.l      d0,savetrp

dc.l
'XBRA','****'
savetrp
dc.l        0

my_trap lea    6(sp),a0
tst.w      l_frame.w
beq.s      cpu68k
lea 8(sp),a0
cpu68k
btst.b     #5,(sp)
bne.s      super
move.l     USP,a0
super
```

* your routine goes here, a0 points to the arguments presented to the trap.

```
movea.l     savetrp,a0
jmp (a0)
```

Make sure your routine is a moderate length, and leave everything as you found it before exiting. You may need to install your routine from the Desktop before debugging as Monst2, for instance, expects the trap vector to stay as it is.

Running a program using other hot keys is not advisable,

aside from certain keys used with <Alternate>-<Help>. If you need this sort of task-switching, use the Desk Accessories or screen dump routine, or alternatively you could hang on until MultiTOS becomes available.

Password



Could you tell me how to run the PASSWORD.S code that appeared on Cover Disk 35 – I would like to be able to

keep prying eyes out of my diary.

Vivian Lal, Australia

stf: The password program is designed to keep people from booting your ST, rather than stopping them running programs. As luck would have it, Daniel Leslie from Essex has sent in a listing designed for what you have in mind. It's on this month's Cover Disk in the PASSWORD folder – full instructions are in the READ ME file.





GAMES

More top game-playing tips from Andy Lowe

Gaunt let

When I load *Gauntlet 2*, a green elf appears when I've got auto-fire on. I have to push this around. I upgraded my ST to 1MByte and it went away, but now it has come back again. The elf is coming from Part Four, which does not exist! What is wrong and how do you think I can fix it?

Matthew Brown, Berks

stf: *Gauntlet 2* was one of the few games which was compatible with the four-way joystick adaptor that plugged into the printer port. You probably have a printer connected to this port so the game is getting confused and is looking for a joystick adaptor which isn't there. Or you may have some kind of eleven poltergeist which has invaded the logic circuits of your ST. Send some ectoplasm to Joshua Greystoke, 4 The Flats, Sandwell, West Midlands and he'll exorcise the irritating, undead beastie.

Disobeying orders

I recently bought the game *Thunderhawk* and I have completed all the missions, except Alaska. My question is: what do you do to get the message "Primary targets destroyed" or "Mission complete, now land" on the first section of the Alaska mission? Are there any cheats for the game? At the moment, I just fly in and shoot everything that appears as a target and when I land, Jack Marshall shouts at me. What am I doing wrong?

Michael Pitman, Notts

stf: Jack Marshall specifically tells you not to engage the enemy unless fired upon. It's likely that you've ignored his orders. Fly in extremely low and raise your height at the last minute. You should be able to get into the main mission area without taking pot-shots at everything in sight.

Monkey business

Having sent *The Secret of Monkey Island* back to US Gold, the game still heaps out just after we get the seltzer bottle

from the cannibals. We have a 1040 STE, what can we do?

C S Roberts, South Humberside

stf: Ah, that old chestnut. Here's the story... There were bugged versions of this game that didn't work on 1MByte machines. The whole thing is a lack of memory problem and, if you have a 1MByte machine and the box explains that the game works on 1MByte, then you have a legitimate reason to ask for a refund.

US Gold know about the problem and, if you have already received a replacement which still doesn't work, try calling them on 021 625 3366. Ask to speak to the customer services department and briefly outline the problem. If they can't provide you with a working replacement, you could always ask for your money back. However, the end sequence to the game is excellent, and it's a pity you can't experience it – although it was printed in the "It's Not Me, It's The Joystick" feature in STF 39...turn to page 58 for your copy if you don't have it.

Absolute chaos

Could you tell me the cheat modes for *Chaos Strikes Back* and *Captive* because I keep getting killed?

Kevin Davies, Edinburgh

stf: Well, that's your problem, mate. No, but seriously... In *Chaos Strikes Back*, to get a strong set of characters, copy the *MINI.DAT* file on the utility disk to a blank disk and rename it to *CSBGAME.DAT*. Now load it as your saved game. As for *Captive*, land on the first planet (Butre) and kill the monsters. Now take off and land again. The monster are reset. Now, go back again and kill them for lots of experience.

Dizzy stuff

I can't get the last valuable item on *Treasure Island Dizzy*. Is there a cheat?

Tim Morris, Gwent

stf: Oh, go on then. For old time's sake. When the game starts, type in *ICANFLY* with no spaces. You can also type in *EGGSONLEGS* to make yourself invincible. Useful, huh?

Where are they now?



I have been trying to contact Protar at the phone number given in your hard drive round up because I am after one of their drives, but I have been unable to get through to them, why is this?

David Long, Wigan, Lancs

stf: Protar have moved to new premises and because BT have not been transferring calls correctly, they have been feeling rather lonely of late. Their new phone number is 0628 789788 and the address is Protar Ltd, 3 High Street, Maidenhead, Berks SL6 1JN.

Write On bro'



We have had several queries from readers who want to know if they can use *Write On* with their daisy wheel printers, including Terry Jones from Malden and Paul Williams from Solihull. Unfortunately, because *Write On* is designed to create printouts in graphics mode, it is not suitable for use with daisy wheel printers

Falcon questions

I note that the Falcon 030 is not fitted with a floppy disk drive – does this mean that, as when the ST range was launched, it will make a great doorstop? Is the price going to remain so high – at £500 I do not consider this to be "entry level" computing. Finally, can you tell me whether the MIDI ports are still supported?

Leslie Read, Surrey

stf: Er – actually the Falcon has an absolutely wonderful internal 1.44MByte floppy drive in the standard position – what it does not have is an external floppy drive connection. Please pay attention there at the back.

The £500 price tag for a 1MByte machine without hard drive does seem high at first, but consider that the Mega STE costs around £600

with the same basic configuration. By contrast, the Falcon has superb sound capabilities, more screen modes than a graphics artist can use, genuine 32-bit processing power and the DSP56001 coprocessor. It's all well worth the dosh – and the price is bound to be discounted by dealers.

And yes, the MIDI ports are still implemented in the same way as on the previous ST series. For the latest lowdown on this new machine, have a look at the Falcon review on page 106.

STOS Turbo602 tip

Just a short note from Ernest John Smith of Birmingham to say that the Turbo602 RAMdisk program on STF Cover Disk 37 can be used from within STOS Basic.

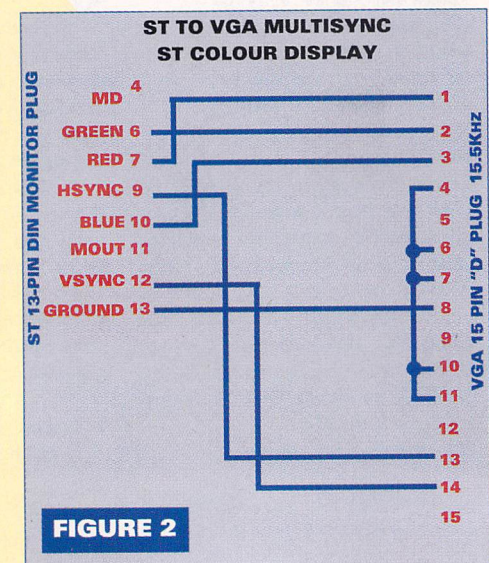
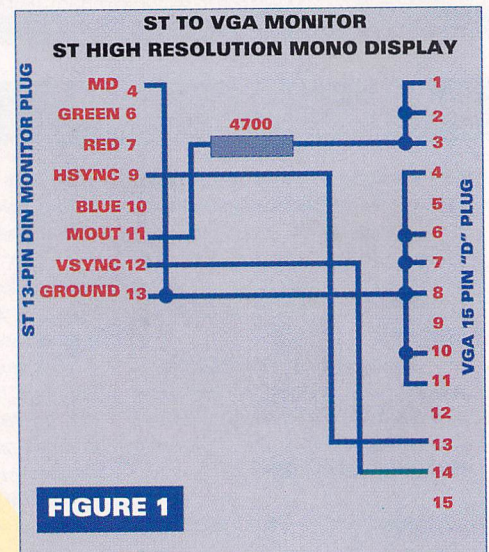
Turbo602 must be the first item to run in the AUTO folder to be able to work with STOS properly, but once STOS has loaded, the RAMdisk can be used to save and load data in the same way as a normal disk drive. Running the compiler from RAMdisk improves speed considerably.

VGA for all



Every month we're asked if it's possible to connect a second-hand PC monitor "I've bought for £10 at an auction" to the ST. Sadly, the answer is, generally, no.

However, Kris Brunt of Stockwood in Bristol has provided details for connecting an ST to a standard VGA monitor to provide a high resolution display (figure 1), and to a VGA multisync monitor to provide colour output in low and medium resolution (figure 2). Kris points out that, for the colour VGA multisync monitor to correctly display the ST colour resolutions, you must be able to set the monitor to operate at a frequency of 15.5kHz.



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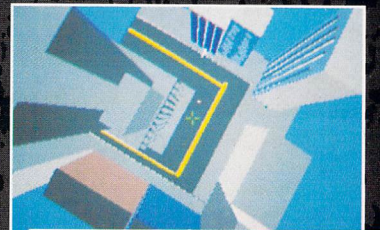
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DOMARK

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Gary Numan's new album, *Machine and Soul*, may seem different from his earlier work, but he's still using much the same technology and techniques, from sampling to synth sounds. David Robinson finds out how he does it.

The Numan factor
S Gary Numan's new album, *Machine and Soul*, may seem different from his earlier work, but he's still using much the same technology and techniques, from sampling to synth sounds. David Robinson finds out how he does it.

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Too many notes, sir

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Four example

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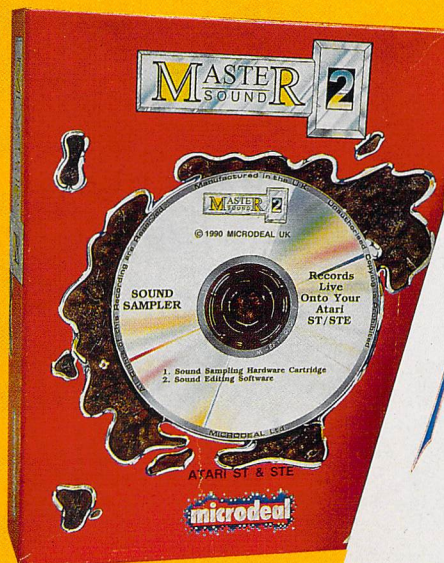
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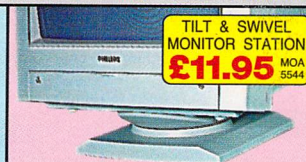
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RANT

Kev Bulmer of Dimension Creative Design, co-author of the forthcoming *Legends of Valour* on:

“The games publishers... “What annoys me the most is the fact that they all like to play safe. We’re trying to do something new with *Legends of Valour* – a role-playing game where you take on the role of a character, so we made it a one-player game because you’re trying to get into the character. All the publishers said: “Yeah, brilliant idea – but we think you ought to go for four players, because *Dungeon Master* did it before – and that was successful.” So you have to **fight** to keep everything different. Nobody wants to do anything that’s fresh or new. Now that publishers are getting bigger – as they have been over the last few years – and developing a management strata, when you go in with the game design they consult the marketing department to see what they think it’s likely to do. Then you get: “Oh, this sort of game **won’t** sell.” They tell us what they believe our target audience is and what sort of games they like to buy and, as a result, we’ve had no end of difficulty in trying to sell publishers new, unproven ideas that we just know people will like.

“You get this really **patronising** attitude from some software houses towards the people who buy the games. They say that everything has to be simpler for the player, it has to be easier for him to understand because, apparently, nobody has the intelligence to read a manual. It’s all got to be on-screen text because, according to certain publishers, **Americans** can’t read manuals, they can’t deal with arcade action. If you followed all these guidelines you’d be left with something that offers absolutely no challenge at all. On a slightly different tangent, the other thing that really irritates me is that we keep being advised to publish the game with American spelling. We have people in the Houses of Parliament talking about teaching English children how to spell things properly – yet here we are pumping material out to them that they’re devouring eagerly which is supposed to contain American spelling!

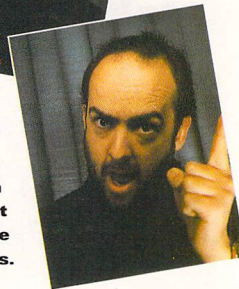
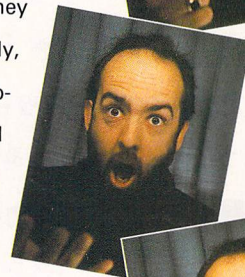
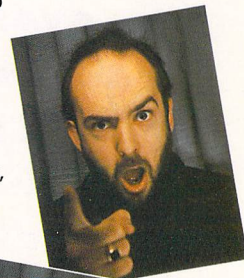
So you have to fight to keep everything different. Nobody wants to do anything that’s fresh or new.

On the Falcon... “We’ve been doing all of the *Legends of Valour* graphics to Falcon standard – which is TV quality. Once you see it on a monitor with a true 24-bit board it is phenomenal. We can actually render stuff

to high-definition TV standard. So, we already have the graphics which can easily be put straight into Falcon and it will knock everyone sideways. The way the Falcon architecture is laid out it’s almost as if it’s been designed to play *Legends of Valour*. If you had a binocular headset with true stereo 3D on it, you’d have an incredible virtuality system – and we know you can do it from some experiments that we’ve been running. But trying to get anyone at **Atari** to give us a Falcon to develop on has been really difficult. We went down to see them about *Legends of Valour* and we were told

■ Kev Bulmer - a man with a mission and a vendetta against photo booths - it takes him seconds to reduce the sturdiest of them to tears.

that games were out, Falcon is a business machine – which we now know to be ridiculous. But when they saw it, the story changed a little and they started to ask us what they had to do to get us to write a Falcon version, and we said **“Give us a development machine!”** This was promised, and now here we are, post-ECTS show, still without a machine. I’ve been an Atari fan since the very first mono ST came out. I paid £750 for one of the only 200 in the country and I’ve been Atari-mad ever since. Now we have this new machine which ought to revolutionise the computer world – it should knock IBM off its pedestal, everyone who uses a computer will want a Falcon when they see what it can do – and it’s up to programmers like us to show people what it really can do. Software sells machines and we want a Falcon to write some software on! **Now! Please...**”



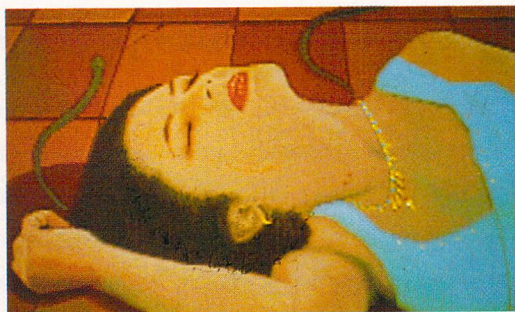
FEATHERS OF A BIRD...

The camp-fire crackled as the travellers gathered around, regarding the wise man with wary eyes. He lifted his gnarled staff and heaved himself up. "My name is Andy Lowe, I've come to tell you about the games that are coming out on the Falcon."

Oh no, more llamas!

Jeff "Yak" Minter – king of the shoot-'em-up, furry beastie fanatic, all-round lovable lunatic – this is your Falcon game. On a personal mission from Atari US, Yak has produced a game with all the usual yacky features – llamas, beasties, blasting, power-ups, psychedelia and extremely enjoyable, blood-thirsty violence. So, it's a bit like *Llamatron* then? No. *Llamazap* manages to pay homage to the tried, tested and trusted horizontally scrolling blast-'em-up formula, while deftly avoiding any of the yawn-inducing predictability so often lazily tacked on to games of this genre.

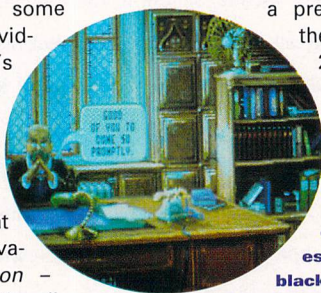
The screen is split horizontally with objects across the top of the screen being inverted in perspective to those at the bottom, as though there's some strange interface dividing the two. There's some sharp and convincing parallax scrolling which makes the game look almost console-like. That snazzy little innovation from *Llamatron* – the ability to lock the direction of fire – has been wisely car-



■ An attractive girl lies dead, evil snakes slithering around her once supple body. This picture is not from *Daughter of Serpents*. It's from *Rome AD92*. Weird, huh?

ried through and enables you to fly away from something while still blasting it.

Llamazap features power-ups a-plenty, including flame-throwers, spread-fire and the orb – a power-up which orbits your ship and can be locked into a particular position on-screen. The orb is extremely handy when watching the scanner, because it enables you to launch a pre-emptive attack on the nasties. There are 25 basic level formats featuring



■ "Ah, come in. What's the problem?" "Well, doctor, I'm involved in a conspiracy involving esotericism and the black arts." "Bad news, I'm afraid. You're a fictional character in what we call an RPG."

planet-surface zapping, underwater action, masses of sub-games and the usual dose of weirdness and all things Yak. The game should be finished by the time the Falcon hits the shops.

Spaced out

"The Federation is on its knees, crippled by social upheaval and financial recession. It is a chaotic time, a time when men of low moral fibre, little integrity and nauseating skin complaints can make a fortune. In other times, they may have been called smugglers, pirates, thugs, mobsters, bandits, hoodlums or traffic wardens, but now they all go by the monicker of... *Space Junk*."

Letting Imagitec get their grubby mitts on Atari's new star was a good idea. A very good idea. *Space Junk* can, very loosely, be

HEALTH WARNINGS FROM SPACE



1 ■ A section of one of the digitised animation sequences from *Space Junk*. It's actually an anti-smoking public information film...

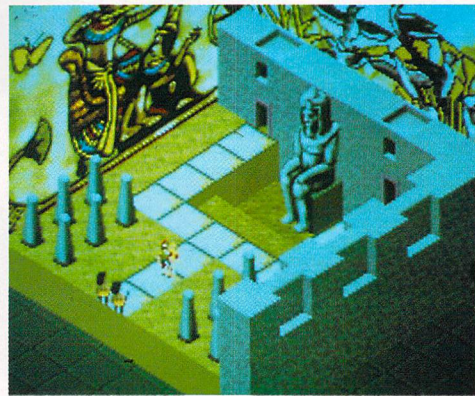


2 ■ "Cough, cough, spew. Hello. Are you a smoker? Do you wilfully flood your lungs with noxious substances every day? Do you find traces of blood in your sputum?..."



3 ■ "...Do you break into breathless, uncontrollable bouts of coughing every morning? Stop bloody smoking, then."

■ Gathered in the hall of purification, the Roman people are bored... "Hey, these steam-baths are all very well - but, I'm fed up of trudging over here on those ill-equipped patches of marsh-land." "Yeah, my chariot keeps getting stuck. It's terrible." Send a punchline for this caption to Rob Mead at the usual address. Make him chuckle and you could win a game.



■ The temple of the great goddess. Look, take it from us, she's a great goddess, OK? The Romans and the Greeks are legendary for their legends. The Roman Gods and Goddesses are irritating because they have different names to their Greek counterparts and, as a result, nobody ever remembers them. Rome is in Italy. Thank you, good night and sleep well.

described as a space-trading adventure game. But it's also a game which claims to offer a completely open-ended method of interaction, leaving you totally free to pursue almost any angle of attack. Yeah, right. Nice coating, what about the contents?

The whole thing is hugely inspired by the Lucasfilm point-and-click interface - the character is viewed from side-on and is controlled in a similar way to *The Secret Of Monkey Island* - featuring actions like Use, Talk To, Give, Examine, Push and even Listen. Each location is illustrated by hand-drawn, digitised backdrops and many background animations. When a crucial character is selected, the game switches to an animated sequence featuring digitised latex puppets - custom designed by Soft Options, the company responsible for the *Spitting Image* puppets. Not ones to shy away from catchy tag-lines, Imagitec call this "Imagination."

The action also features those all-powerful sub games - you can challenge people to games of cards, check out the arcade machines in the bars, go for a gamble in a New Vegas casino... the possibilities are endless. *Space Junk* sounds like the perfect adver-

tisement for Falcon and is going to be published by Mirage, in floppy and hard drive versions, next year.

Millennium Falcon

After that awful headline, you can be forgiven for expecting some decent Falcon game news. Firstly, this one has nothing to do with Star Wars, nor is it remotely connected with space. *Rome AD92*, apart from having one of those awkward titles, is a trip back to ancient Rome - a time of ambition, vicious gladiator power struggles and comedy helmets.

You play a bloke by the name of Hector - a humble slave who must battle his way to the top of Roman society without once reciting the "What have the Romans



■ "Taxi, darlin'?" "Erm, please. Could you take us to the lair of the lord Satan, he who defiles the innocent, the most high and evil upholder of the antichrist? We have to kill him." "Yeah, And I'm Frank Sinatra."

ever done for us?" bit from *Life of Brian*. This involves lots of political thuggery and military command, which, if dealt with intelligently, can bring you up against the Emperor himself in a final sword-against-sword confrontation.

There are six levels, each with their own characters, controls, landscape and plots which can be viewed from isometric, 3D and map views. It's a game of status, honour, military prestige and sticking huge knives into people's hindquarters. Sounds like the most fun you can have without watching *Caligula*, doesn't it?

Serpents' Kiss

An ancient document of awesome power, a web of intrigue and a dead body down at the dockside - all this is featured in the arcane and legendary world of the *Daughter of Serpents*, where primeval Egyptian forces, er, make things difficult for you. When you arrive in Alexandria you notice a mysterious Turkish passenger who has been strangely holed up in his cabin since leaving Constantinople. The Turk becomes involved in a quayside disturbance when a hooded Arab lunges at him with drawn daggers. The Turk shoots the Arab, who retaliates by stabbing his

adversary then dies from a ruptured heart. Good intro. Cinematic and all that. So, what's it about?

This complex role-playing game (RPG) is designed by Eldritch Games, who programmed *Hound of Shadow*. The character design section is beautifully thorough and enables you to define everything about your role from language abilities to personality attributes. *Daughter of Serpents* boasts a graphics-based user interface - which incorporates speech-bubble text and enhanced object manipulation - with diverse and carefully researched puzzles and locations.

It also has a much-maligned occult element - where you become a specialist in a particular discipline - so you get to throw plenty of wicked spells and invoke all kinds of demons. Eldritch Games have gone for an intense, cinematic feel to the action, you learn things via clever use of conversation and solid detective work. But what about the *Daughter of Serpents*? Is it a strange, esoteric priestess destined to destroy you in a climactic psychic duel? Or is it just a big snake with a dress on? Both *Rome AD92* and *Daughter Of Serpents* are published by Millennium and should be available on Falcon towards the end of the year.

WHAT ABOUT THE REST?

It's early days yet, but Falcon already has well over 100 developers sweating over both games and serious software. If this kind of support is any indication of what's to come, the machine's future looks distinctly dazzling. From here on, it's entirely up to you. Meanwhile, here's a brief outline of some more Falcon games due for release soon

Goblins, Goblins 2 and Ween - The Prophecy

French software house Coktel Vision are currently pondering the viability of converting their bizarre merchandise onto Falcon. You could always influence their decision by registering your support. Call Coktel Vision on ☎ 010 331 46309957 or Digital Integration, their publishers, on ☎ 0276 684959.

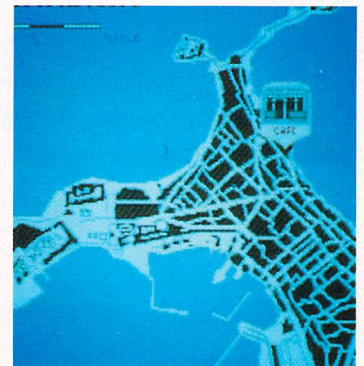
Raiden

Mirage are safely in the process of converting this coin-op onto Falcon. It's a fast and hectic, vertically scrolling shoot-'em-up which should easily blow away all those prissy little console games.

Innocent

Most definitely being developed as we speak, this is an "incredibly user-friendly" fantasy role-playing game set in the future. Well, it'd have to be fantasy, being set in the future, wouldn't it? Anyway, we are assured by Psygnosis that it's a rather irresponsible, tongue-in-cheek little affair about tax-evasion starring Lester Piggott. No, just kidding. *Innocent* should be available before the end of the year.

...and you never know, we may even get the sequel to *Monkey Island* on the Falcon. Take our advice. Place your orders immediately.



■ The overall map view from *Daughter of Serpents*. As certain puzzles are solved and locations are visited, they are indicated on the map. Extremely useful and jolly helpful. See, told you they're not all really devil-worshipping lunatics down there at Eldritch Games.

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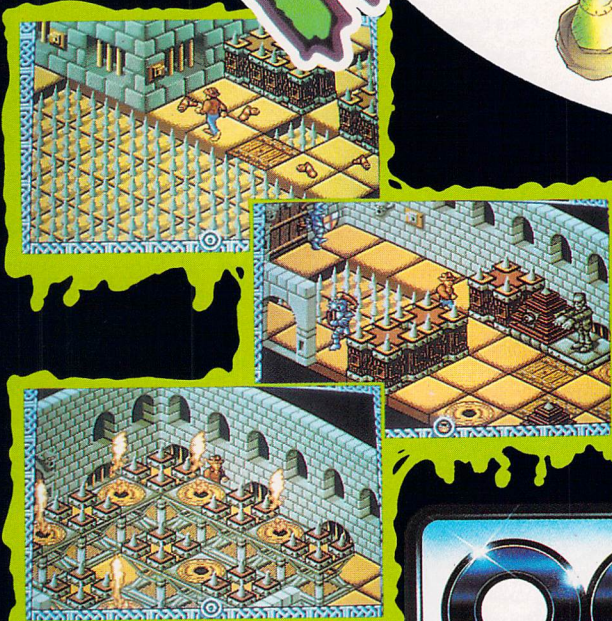
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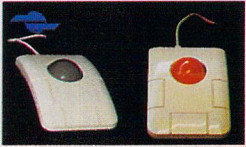
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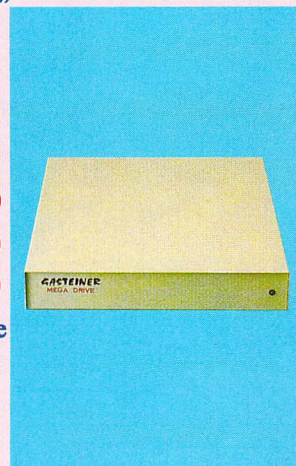
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REVIEWS

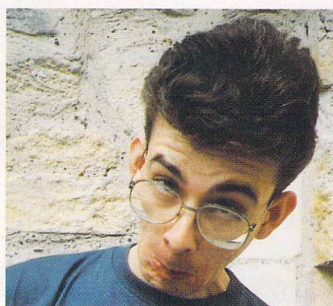
LIGHTLY TOASTED

ANDY LOWE



Fave sport: Tennis
Fave ST sport: Sensible Soccer
Fave celeb: Sherilyn Fenn
Fave cheese: Austrian smoked

JON PILLAR



Fave sport: Indoor bowls
Fave ST sport: Formula One Grand Prix
Fave celeb: Magnus Pike
Fave cheese: Dear old Cheddar

ROB MEAD



Fave sport: Tiddlywinks
Fave ST sport: Nigel Mansell's Championship
Fave celeb: Eastender's Mandy
Fave cheese: Edam

TIM TUCKER



Fave sport: American football
Fave ST sport: Speedball
Fave celeb: Tory Amos
Fave cheese: Irish Cheddar (cheap and tasty)

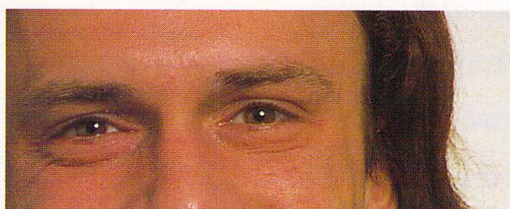
SERIOUSLY CHARRE

ANDY HUTCHINSON



Fave sport: Gladiators
Fave ST sport: Inserting the mouse lead
Fave celeb: Erika Eleniak
Fave cheese: Dairy Lee

CHRIS LLOYD



Fave sport: Table tennis
Fave ST sport: Sensible Soccer
Fave celeb: John le Mesurier
Fave cheese: Boursin

CLIVE PARKER



Fave sport: Skittles
Fave ST sport: Soldering
Fave celeb: Kim Basinger
Fave cheese: Stilton

PETER CRUSH



Fave sport: Golf
Fave ST sport: Microprose Golf
Fave celeb: June Whitfield
Fave cheese: Cheshire

PLAY AWAY

Take a selection of these games, stick 'em in your disk drive and er, play them. That's what we did, anyway...

Amberstar	page 92	Scrapyard Dog	page 103
Bill and Ted's Excellent Adventure	page 103	Shadowlands	page 83
Blue Lightning	page 102	Magic Worlds	page 95
Hard Drivin'	page 103	Striker	page 97
Jahangir World Championship Squash	page 101	Supercars 2	page 100
Lotus 3	page 80	Switchblade 2	page 100
Rampage	page 103	Tiny Skweeks	page 87
Robo-Squash	page 102	Ween	page 88
		World Championship Boxing Manager	page 101

For the latest Public Domain releases, turn to page 119

SERIOUS STUFF

FALCON

Check out our amazing review – the Falcon inside and out, we cut through the hype.

page 106

FLOPTICAL DRIVE

Store masses of data for a bargain price on this new accessory!

page 114

THE LINK

No more worries about the lack of a SCSI interface on your ST – fit any hard drive you like!

page 113

MIGRAPH OCR

Teach your ST to read – all you need is a hand scanner and this.

page 113

PAGESTREAM 2.2

The upgraded DTP software – should you bother with this?

page 112

SCANLITE

A Desk Accessory scanning program.

page 112

SY-35 SYNTHESIZER

Yamaha's beautiful new synth revealed in all its glory.

page 111

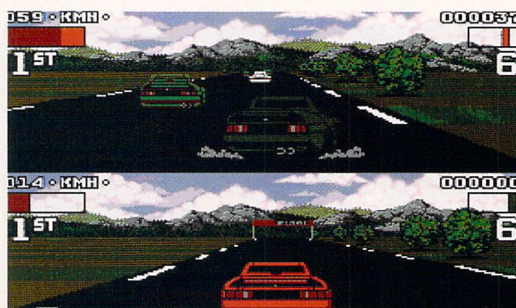
LOTUS 3

THE ULTIMATE CHALLENGE

Ah, on the road – that dazzling, kinetic experience of traversing the great unknown. Your head whirling with fantasies of free and hedonistic abandon. Shouting out the window: "You could get a bus through there, you four-eyed git!" Andy Lowe burns rubber with Gremlin for the third time, being careful to explain what RECS stands for...

SOFTWARE HOUSE: **GREMLIN**
PRICE: **£25.99**

Racing Environment Construction System, actually. This beastie is, according to Gremlin, the factor that elevates *Lotus 3* from its predecessors – because it enables you to redesign the courses to your own taste, instead of putting up with the ones the programmers thought appropriate. These construction kit affairs have always been popular – from shoot-'em-ups to the 3D variety – and, although RECS sounds suspiciously like a gimmicky buzz-term to stick on the box, it's a worthwhile feature. The idea is that, instead of just fiddling around



■ The two-player option. You get a split screen and you have to beat your mate who, invariably, moans about his joystick Fire button sticking or the right-direction not working.

with it, you use it to enhance your enjoyment of the game.

3D

One of the big problems with driving games is their lack of variety. Fortunately the programmers of *Lotus 3* have taken great care to

tackle this. If you haven't seen *Lotus 1* or *2*, the basic gameplay is remarkably similar, with the same method of control, 3D perspective and the option of either a competitive or timed game. But this time there's the option to race – in split-screen mode – with another human, and, so the manual claims, there's the prospect of around three trillion tracks to deal with. But, ahem, we all know that this is a rather tortuous mathematical calculation based on the permutations of the RECS track-designer. A track's hills may be 1% steeper than they were on the previous terrain, but you'd have to be pretty pedantic to argue that this made it a different track.

K9

So, what are your options? The gears can be automatic or man-

THOSE SPECS!

Especially for readers of Performance Car – here are those rather tortuous specifications of the choices of car

1. The M200. Maximum speed – 148mph. 0-60 in 5.7 secs. Maximum power – 268 BHP. Maximum torque – 259 lb ft.
2. The Esprit Turbo SE. Maximum speed – 168 mph. 0-60 in 4.7 secs. Maximum power – 364 BHP. Maximum torque – 361 lb ft.
3. Elan SE. Maximum speed – 197 mph. 0-60 in 6.7 secs. Maximum power – 165 BHP. Maximum torque – 148 lb ph.

So. That's nice and clear, then.

DRIVE, THEY SAID - SO WE DID

13 different scenarios are available. Here they are in all their picturesque entirety, complete with their on-screen iconic counterparts – click on the pic you can see in the top right to access the specific scenes



■ "Danger - bottom cleavage in the area." Watch out for cones, barriers, potholes, pools of tepid tea and discarded copies of *The Sun*.



■ Mud and water on the track, but it's not particularly difficult. No real hindrances.



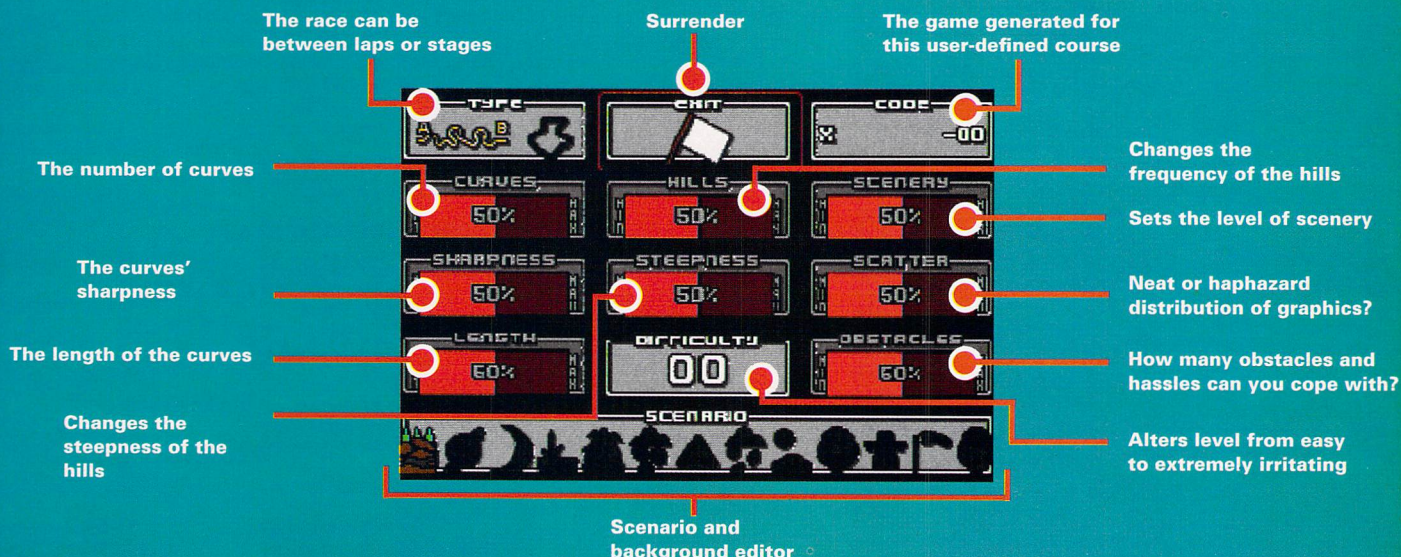
■ It's raining. The clouds have opened. The road is wet. You're going to skid. You're also going to swear a lot.



■ Driving through the city of the future. A few hazards here – including magnets and volatile lasers at the side of the road.



■ This is one of the hottest areas on Earth. The sand's the problem here – it affects your grip on the road. And reality.



should bother buying the sequel to the sequel. Is it really as deluxe as the hype suggests? Well, the RECS is well-designed, but, if you use it subtly, it's difficult to notice any difference. Only when you crank the curve-sharpness up to 100% and the scenery down to 0% do things begin to

seriously change. As a single selling point, the RECS is pushing it – particularly if you have Lotus 2. Remember: Lotus 3 is the Bentley to Crazy Cars 3's Rolls Royce. **stf**



■ Before the race, you can select a suitable tune to play in the car as you speed around the track. Alternatively, turn down the volume and stick something on your stereo. The thought was there.



■ **Limited visibility is the only hazard here, unless, of course, you get distracted trying to work out what the lights in the distance are on.**



■ Some sections of the track are completely submerged in water. But, we didn't see them. Still, this scenario is a bit of a pain anyway.



■ Here it's hard to stay on the track and you could find yourself going off the rails, running your fingers over your lips: "Brrbbllbbllbbllle."



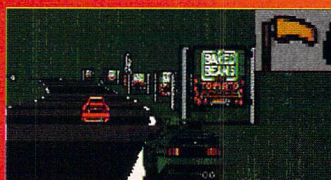
■ As in real life, snow's very pretty but bloody annoying. Slippery surfaces and impaired vision are the things to watch here.



■ Otherwise known as pea soup. The ultimate in bad visibility. Anyone who's ever driven in fog knows what a bind it is.



■ **Realism takes a dive here. When you're in a top speed head-on collision, you just suffer a tiny drop in speed. Not a whiplash in sight.**



■ **Blows your car around.** Nothing to do with flatulence, although a couple of visual jokes for toilet-humour enthusiasts are included.



■ Logs on the track, dense trees lining the action and a bit of water to irk you just that little bit more. Why not go and have a lie down?

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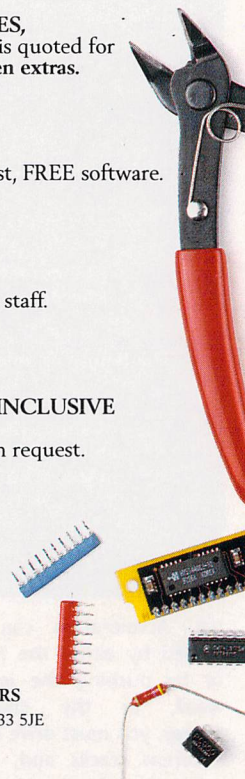
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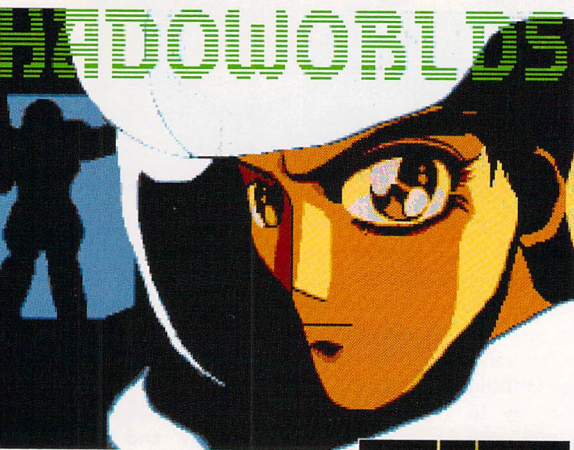
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Titles marked * are not yet available and will be sent on day of release.

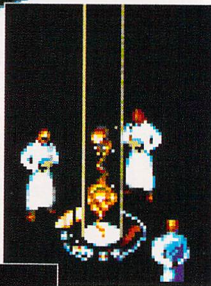
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A science fiction role-playing adventure game where you really are in the dark. Tim Tucker strikes a match and peers through the gloom



■ The attractive Japanese-style graphics give an unusual look to the game.



■ "Hmm. Looks like an intelligent and highly advanced alien. What do you think we should do?"
"Er, run?"

■ "Yeah, sod it, let's get outta here."



■ A member of your team stumbles across some blobby things floating around in tanks. In the dark. Yum yum urgh!

SHADOWWORLDS

SOFTWARE HOUSE: KRISALIS
PRICE: £25.99

Light and darkness are important things. They symbolise the continuing struggle between good and evil, day and night, peace and war and, er, being able to see or not. *Shadowlands* is all about these struggles. You're surrounded by darkness and you have to, well, light it up. This is the sequel to *Shadowlands*, a fantasy role playing game in the *Dungeon Master* mould, which got a rating of 84% in *STF 33*. *Shadowlands* has a completely different plot and replaces the fantasy environment with a science-fiction, *Alien*-esque one.

It's a bit dark in here

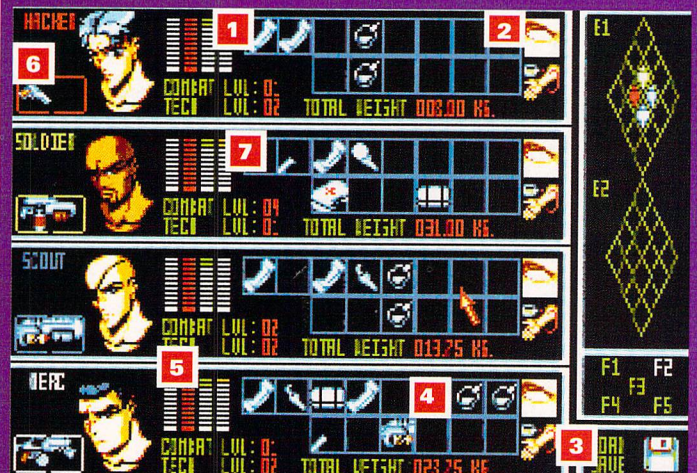
You've lost contact with your top-secret weapons research facility on Magna Six and things are beginning to look suspicious. Vari-

ous computer terminals inform you that areas of the weapons facility have been infiltrated and alien life forms detected. You even come across a few hibernating aliens on your travels. But exactly what they're up to, and why, is for you to find out.

You have to use your ST's mouse to control a team of four futuristic soldiers, but this is not as easy as it first appears. It's OK when you've got a big open room they can all find space in, but when you get to a narrow corridor or a doorway they all try to get through it at the same time. Similarly, if one of your characters gets stuck behind a door or wall, the others have to shuffle back to get him - your strategic team formation rapidly descends into farcical bungling, like a scene from a Marx Brothers film. This is bad news when you're on the look out for a race of deadly aliens. Often

WHAT'S THIS THEN?

The inventory screen is where you organise what the characters carry, check health ratings and so on.



- 1 You need batteries for lighting your lamp but they run out eventually, so pick up as many as you can.
- 2 Click on the eye icon to give your character a well earned rest. This is where you determine the formation the group walks in. You are then bunched together, or in two separate groups.
- 3 Drag the fluid bags onto the intravenous drip icon to replenish your characters. Surely they could have brought along some sandwiches?
- 4 Fluid bags are essential - they're your food supply.
- 5 These bar graphs display your health, strength, fluids and battery power. Two-handed weapons come in two parts and give you a lot more power when encountering baddies.
- 6 Objects held in the left and right hand.
- 7 This is what each character is carrying. Crates enable you to lug around more items, but slow you down considerably.

CONTROL TEAM

This is where you control the game and it always appears at the bottom of the main screen. When a part of the body is activated on the central control character you can move the cursor around the game window and suitable objects flash

- 1** Click on a character's face to make him the control character.
- 2** Click on the left arm to use objects held in left hand, like weapons.
- 3** Click on the head icon to look at things – usually computer terminals. Keep the mouse button held down to light the helmet lamp.
- 4** Your character's health is displayed here.
- 5** The left leg walks the team as a whole, in the formation specified on the inventory screen.
- 6** The right leg walks the character on his own, leaving the rest of the team behind.
- 7** Click on the right arm to operate control panels or pick up objects that are lying around.



it's quicker to move characters one at a time, but even that's not easy because it's practically impossible to tell them apart.

So, what about the game? The shadow effects are superb, imparting a wonderful sense of creepiness; you find yourself peering into the darkness, wondering what is lurking there. You also get a real chill from the barrenness of the place – where is everybody? It's well spooky. There are two ways of lighting up the place. There are the battery-powered lamps in your helmet, which have a limited life-span, and the flares you find on your travels.

Tooling up

Stupidly, you enter the base completely unarmed, but as you walk

around the rooms you find various weapons and objects you can use. The weapons systems are excellent – you start off with simple one-handed weapons like lightsabres and pistols, but later find two-handed weapons. These come in separate halves, which you can customise. For instance, you could take a laser and put it with a cannon for a laser cannon, or you could use the laser with an auto barrel to get rapid-fire laser shots.

Weapons are more or less effective, depending on what you're fighting. At the start you can get by with a pistol and a lightsabre, but the tougher robots need a

good pasting from a laser cannon to get rid of them. Unfortunately, you have to get past one of them before you can get a laser cannon, so you have to be nimble, too.

There are puzzles to solve on your way around; the lighting effects you use are the key to some of these and quite often you have to place objects on pressure pads, or turn off flares and lamps to open doors. None of this is helped by the robots firing at you from the darkness, and you have to do a bit of dodging before you find out where the blighter is.

VERDICT

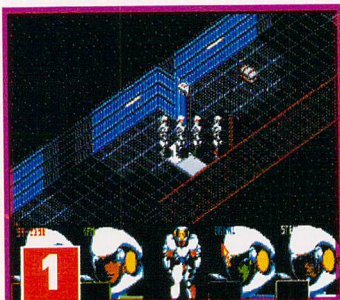
Technically *Shadowlands* is faultless. There's a real

sense of atmosphere and the laser battles with hard-looking robots are great fun. However, the key to a good RPG is its addictiveness and this game doesn't measure up – it's more enticing than habit-forming and you certainly won't lose sleep over it. The gameplay can be annoyingly slow and it's irritating when you have to keep an eye on fluid levels, health and so on. You also need to save the game frequently, otherwise team members cop it while you're trying to do the puzzles. If it captures your imagination, go for it, but it doesn't go down as one of the all-time greats. **stf**

BY **TIM TUCKER**

GETTING STARTED

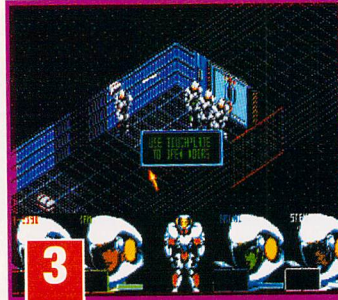
The first few rooms in Shadowlands are designed to get you used to the tricky control system. Here are a few of the basic concepts to get you going



- 1** Standing on pressure pads opens doors... sometimes. You can't always get near the doors the pressure pads open, so you have to leave a heavy object or one member of the party on the pad while the rest go through the door.



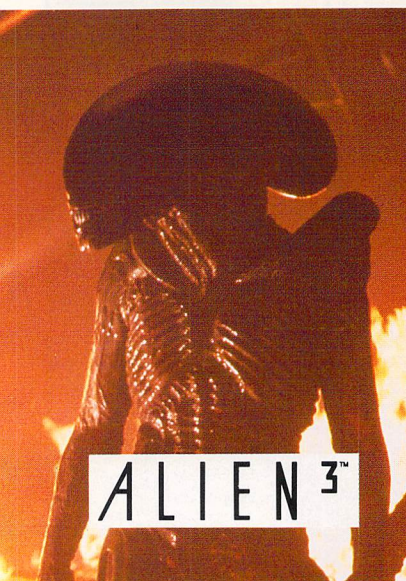
- 2** Crates often contain useful objects, but even the empty ones can be used as part of your inventory to carry things in. They are very heavy, though, and tend to slow you down.



- 3** You find computer terminals all over the place. They contain handy hints on how you can use objects or any information you might have about what's going on.



- 4** These floating nasties can fry you if they get too close. At this stage in the game you need a lightsabre to finish them off. Once you've killed them you can pick up the objects they leave behind.



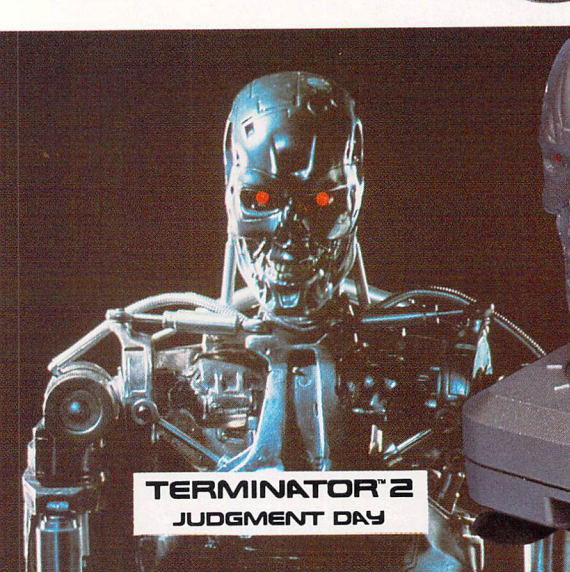
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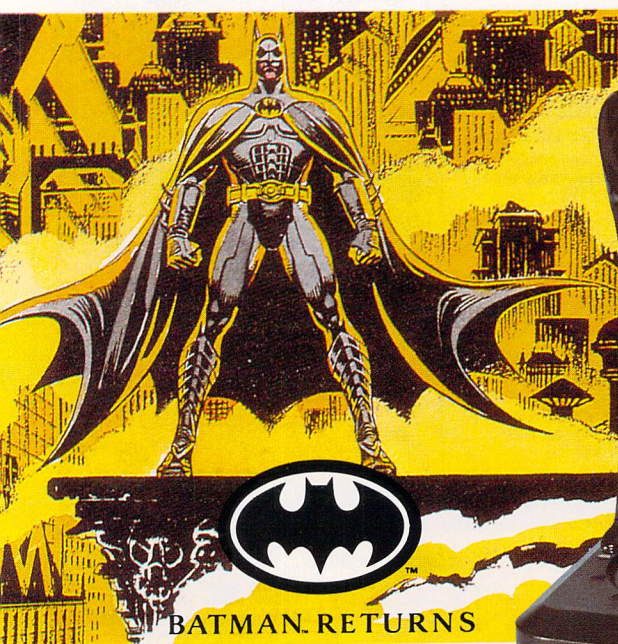
CHEETAH

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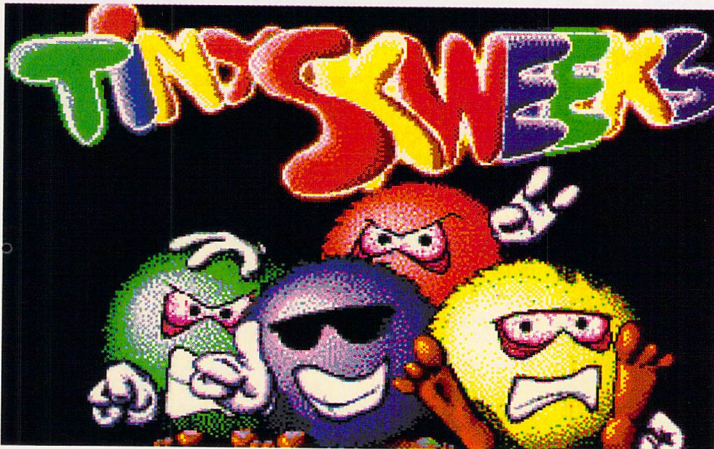
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TINY SKWEEKS



■ Enter the world of the Skweeks - a land of dayglo garishness, putrid cuteness and reams of codes being sent into Gamebusters. Grrr.

SOFTWARE HOUSE: LORICIEL
PRICE: £29.99

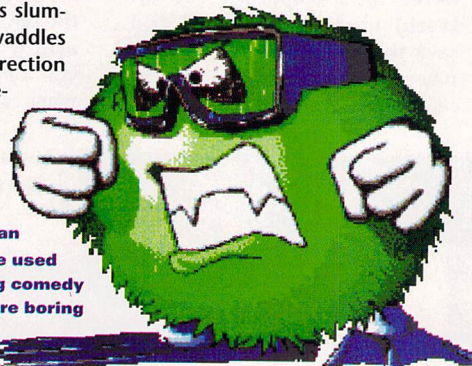
This is a game devised by people with, er, curiously fuelled imaginations. It's like this, you see... Mr and Mrs Skweek gave birth to lots and lots of Skweekettes - cuddly, furry little blobs. Like all babies, they seemed cute at first, but - after the sight of one particularly disgusting nappy too many - their parents realised the Skweekettes were only happy when causing endless disruption. Then it all got nasty - they kidnapped a spacebus driver and threatened to paint the entire planet pink... And you're the sucker who has to put 'em all to bed and save the Earth from looking sickeningly cute.

It's alright, it's from France. And it's a sequel. The original, *Skweek*, was released in 1989 and was a puzzle game with a slightly bizarre theme. *Tiny Skweeks* is a

puzzle game with an immensely bizarre theme, some fuzzy, cutesy graphics and distinctly unhinged sound-effects.

There are 101 levels. Each one is a single-screen maze which contains one or more Tiny Skweeks, the coloured circles - or sleepers - which represent their beds and, usually, some annoying obstacles. The idea is to work out a path to the bed, click on the Skweek of the corresponding colour and guide him to his slumber. The Skweek then waddles blindly in the desired direction until he bumps into something. Complications abound in the form of one-way arrows, surprise boxes - which repel any

■ Uncle Entwistle was an eccentric sort of Skweek. He used to amuse us by donning comedy goggles and flippers, before boring everyone with his artichoke anecdote.

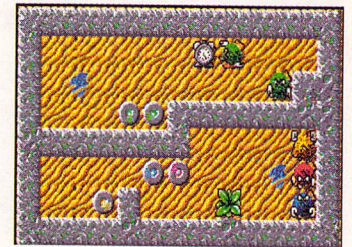


Skweeks that wander too close, doors - which can only be opened by a Skweek of the same colour - and switches which must be thrown to light up the beds on some of the later levels.

Now for the good news. You get occasional boosts in the form of sleepers - which automatically send certain coloured Skweeks into a doze, tele-transporters - which teleport Skweeks to otherwise inaccessible areas of the screen, and time, life and immunity bonuses to make the game just that tiny bit more varied. Every level has a code, so, instead of worrying about how much progress you're making, you have to keep track of all those tatty bits of paper with your level-codes written on them - if you want to avoid starting from the beginning every time you lose all your lives, that is.

VERDICT

Although *Tiny Skweeks* doesn't have the blinding originality of its genre-cousins,



■ *Tiny Skweeks* is one of those games where you can do things like pick up clocks and... smash into walls, sniggering at the consequences. Hardly belly-laugh material, but good for a guffaw or two.

Lemmings or *Push-Over*, it's still a cheeky and refreshingly bizarre puzzle-'em-up which holds your attention for a few screens until you get stuck. Then you write down the code and come back to the action when you feel like it. It's more of a charmer than a gripper and although you may find yourself sneaking the occasional crafty crack at the level that had you stumped, you're not about to lose any serious sleep over it. The game takes a suspicious amount of time to display any hard variety and there's the sense that, within the 101 levels, there are really only 30 or 40 different challenges glued together and shifted around to suit the needs of the maze.

An engaging enough puzzler which justifies its existence, but not its price.

BY ANDY LOWE

■ One of the later levels. The white blob is a joker which lets the Skweeks survive after an explosion. This is extremely useful, because it means that when you die, you don't really die. Outrageously handy.



More codes, please

If you're a bit crap and you can't get very far in *Tiny Skweeks*, these codes at least let you see the first ten levels

1. GASIANDI.
2. GROIDEKN.

3. NEBACRUC.
4. RESTUSHA
5. ENTRLACO.
6. BOTCREPA.
7. OCTOANVA.
8. COADSUPP.
9. RAWBSKIT.
10. TANGVILI.



WEEN

Are you weird? Do people stare at your Pacamac, jodphurs and Garfield slippers when you go to the shops? Andy Hutchinson has found just the game for you

FROM: **COKTEL VISION**
PRICE: **£29.99**

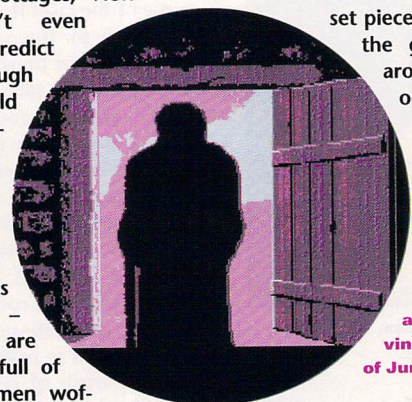
How do you feel about prophecies? You can't possibly take them seriously, can you? Nostradamus was clearly not running on all eight cylinders, Graham Taylor is obviously using the wrong kind of crystal ball and Witch Throbhazle of The Cottages, New Malden didn't even manage to predict that the borough council would drive the by-pass through the local duck pond.

Ween is about prophecies which is fair enough – games like this are always chock full of wizened old men wofling on about ewes giving birth to two-headed lambs and crotchety old women wittering on about toadstools, the full moon and the blood of a family line. However, *Ween* takes the prophecy factor to new heights. The deal is that the Master Sorcerer has been weakened (as predicted by a prophecy) and a large demonic chap called Kraal wants to take over the land (as predicted by a prophecy). You (as *Ween*) have to stop Kraal and save the kingdom from an eternity of *Prisoner Cell Block H* repeats. At least that's the hocum

you're asked to find credible and on which Coktel Vision hang this weirdsville game.

Artificial, elaborate, forced

The best way of looking at *Ween* is as a series of point-and-click set pieces. Each stage of the game is based around one (or occasionally two) rooms. Within these rooms there are up



■ The stranger stood menacingly in the doorway doing an utterly unconvincing impression of June Whitfield.

to eight objects. You have to use these along with the items in your inventory to open the door to the next set piece. It's like a complicated version of that bit on the *Krypton Factor* where they have to transform a selection of shapes from one form into another, only you don't have to wear a red, green, blue or yellow jumpsuit.

To find out what objects are in the room, you simply search the screen with the mouse pointer as if it were a metal detector. If you can use an object then its name appears at the bottom of

the screen and you then have the opportunity to either pick it up, examine it or to use it with something else in your inventory. This manages to be one of the best and the worst features of the game. On the one hand it's good not to have to type things in,

Really he seems as useful as a chocolate tea cup

while on the other hand you often have to stare intently at the screen, moving the mouse pointer systematically around the picture for ten minutes looking in vain for helpful objects. Some of these objects are no bigger than a pixel, so you find yourself

Hatstand

An old wizard appears at certain points in the game who looks like a cross between Nicholas Ridley, Nostradamus and the chap who works in the sweet shop around the corner from the *ST FORMAT* office. Weird, that.



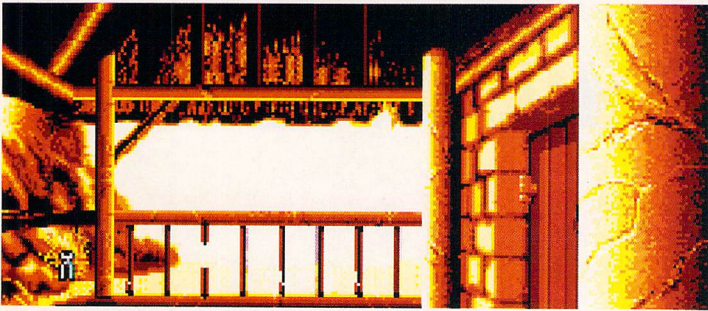
■ Anyway, after she'd shampooed me I fell asleep in the chair. The next thing I knew Marcey was standing there unplugging her curling tongs and my barnet had been transformed into a flipping afro. I was not impressed.



■ So what kind of a seer would live in a hovel like this? Well, let's see, he's obviously a keen reader and I detect something of a nautical influence in these knick-knacks. Graduation photo's awful too. No surprises there then.



By my teeth! There's a lovely fire in some kitchen!



■ This balcony is to the left of the first location in the game. Use the tongs on the weed and then on the guard rail to get some kindling for the fire. Don't ask me why you'd use tongs to disassemble a guard rail, I gave up trying to understand French games after *Captain Blood* had me flummoxed.

inches from the screen, scanning for a likely looking different coloured pixel.

The problems in the game range from the sublimely simple to the infuriatingly obscure. It's almost as if the programmers came up with a random list of objects and then contorted them into a puzzle. This means that you end up performing the most obscure tasks like rubbing feathers on chests (oer), using cauldrons on leaking boats and poking wasp traps with copper pipes. Occasionally you find yourself turning to an imaginary person Woody Allen style and saying "Can you believe this, I just rubbed a feather on a chest." Or at least you might if you're as mad as *Ween's* programmers.

Laboured, contrived, planned

It's not even as if your end objective on any screen is that clear. You sit there pondering exactly what the hell you're meant to do with a cauldron, a ring, a tiara, some pollen, some venom, three grains of sand, a feather and an ECU when there's not even a door visible on the screen. It's all woe-fully weird in a French programmer sort of a way. There is a kind

of on-line help in the form of Petroy. This chap can be asked about things during the game, but really he seems about as useful as a chocolate tea cup. The

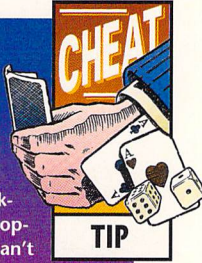


■ Yes, children, if you go to illegal raves you are likely to end up looking like this. Your hair will fall out and none of your friends will speak to you ever again. This has been a typically cretinous government information bulletin.

general idea seems to be that you clicked on Petroy and then on the object you were curious about, but 95% of the time he'd simply say: "I have nothing further to teach you on that subject." Yeah, cheers Petroy, old mate. Sometimes you can also call on the services of a fruit-eating vampire bat called Urm.

Play with your ball

To complete this game you have to master the art of transforming your magic copper ball. You can transform it into a cauldron, a pipe and a sword by using the appropriate magic jewel. To get the cauldron use the ring on the ball, to get the pipe use the tiara on the ball and to get the sword use the necklace on the ball. Don't forget that you need to transform the copper ball back to its original form and into something else, you can't leap-frog from say, sword to pipe. Oh yes – and the king of the ants sits on the leaf at the top right of the screen with the hidden door.



If you feed him some kind of fruit (he's not too fussy what sort you choose) he does something for you. You won't be able to persuade him to go and bite the hell out of Petroy though, however much you plead with him.

One of the most important items in your inventory is a magic

when you have to keep doing it. All of this isn't helped by the lengthy pauses whenever there's a load from the disk drive.

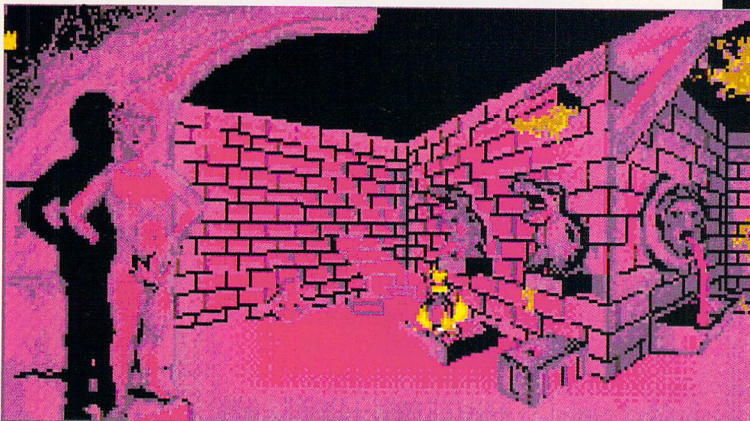
Verdict

For all this game's infuriating faults it's curiously addictive. You're likely to find yourself sitting in front of your ST for hours patiently rubbing various base metals against wasp traps. The whole thing really is too bizarre for words.

On the graphic and sonic front you can't fault *Ween*. The static screen shots which you end up gawping at for hours on end are pleasantly drawn and there are a few well chosen samples scattered throughout which add to the atmosphere. The disk loads take an age, but then in a game like this that's not such a great problem and it only becomes irritating when you're desperate to get onto the next bit.

Ween's a bloody curious number, it's so odd that Vic "Hat-stand" Reeves would be completely freaked out by it. It's also incredibly appealing in a way that fans of *Rowan and Martin's Laugh-In* would understand; even our Art Editor got engrossed in it for three full days – and he was on deadline. Buy *Ween* only if your ability to tolerate pain is extremely high. You have been warned. **stf**

■ And finally, in a daring raid last Wednesday, callous thieves stole all the toilets from Ealing Police Station. A senior officer told reporters that detectives have nothing to go on. And it's good night from them.



■ Funnily enough, this is exactly what the Roman Baths in Bath (just three minutes from this magazine) look like. Simply imagine a few hundred Spanish school children with day-glo rucksacks and the picture's complete.

IF YOU'VE BEEN FOLLOWING SUPER PLAY, YOU'LL KNOW THAT EVERYBODY ELSE HAS, TOO.



This year the magazine to watch for cutting edge console gaming isn't one of the ones you might have expected. It's *Super Play*.

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existing games and – of course – new game reviews, nobody brings you as much for the Super Nintendo as *Super Play*. For those who've been following the Super NES, the launch of *Super Play* was when everything *really* got started. For the competition, it's going to be a long, heart-breaking year.

SUPER PLAY: CATCH THE EXCITEMENT FOR YOURSELF.

RICOH PCL5 LASER PRINTER

Ricoh UK Ltd is part of the worldwide Ricoh Group of companies, originally established in Japan, in 1936. With a turnover of over \$5 billion and 37,000 employees, Ricoh have been producing computers and peripherals since 1971 and are the world's second largest manufacturer of Laser Printer engines. Ricoh have employed their expertise to produce a 'first' in laser printers for the world market, the LP1200 with FLASH ROM.

Fully HP LaserJet III™ compatible, the new LP1200 employs industry proven laser technology. Unlike LED page printers, which use light emitting diodes, the LP1200's laser lightsource, focussed by high quality lenses, is able to produce the most accurate and intense printed images. It has 2Mb of RAM built-in and requires no additional RAM to print a full A4 page of graphics at 300dpi. Its fast, efficient processor and engine, together with a straight paper path design, allows printing at a full 6 pages per minute. Unlike its competitors, this advanced laser engine enables the LP1200 to address a range of print resolutions up to 400dpi. A special driver, combined with the 2Mb RAM upgrade, enables the Ricoh LP1200 to print at 400dpi from Windows 3.

Again, unlike the competition, the LP1200 includes a powerful document description language as standard. This language, 'LAYOUT', offers unique opportunities to develop custom-made printing systems. Forms and document templates can be designed and stored electronically in the LP1200's FLASH ROM, alleviating the need for pre-printed forms!

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TOP TRAY
(OPTIONAL EXTRA)



The Ricoh LP1200 is a genuine laser printer and not an LED printer. Make sure you check out the competition!

See how the Ricoh LP1200 compares to its Laser Printer Competitors

FEATURES	EPSON EPL4100	HP L/JET III	M'AN TALLY MT904+	IBM 4029 Model 010	RICOH LP1200
Average Street Price (excl. VAT)	£569	£699	£699*	£750	£699
Official RRP (excl. VAT)	£945	£1,179	£1,099	£1,099	£1,195
Maximum resolution in dots per inch	300 x 300	300 x 300	300 x 300	300 x 300	400 x 400
Windows 3 Driver @ 400 dpi	-	-	-	-	YES
Print Speed	6ppm	4ppm	4ppm	5ppm	6ppm
Straight Paper Path	YES	-	-	-	YES
PCL 5 Printer Command Language	-	YES	YES	-	YES
HP-GL/2 Vector Graphics included	-	YES	YES	YES	YES
Resolution Improvement/Enhancement	YES	YES	YES	YES	YES
Standard RAM	0.5Mb	1Mb	1Mb	1Mb	2Mb
Full A4/300 dpi graphics with standard RAM	-	-	-	-	YES
Warm Up Time	<45 secs	<60 secs	60 secs	33 secs	45 secs
First Page of Text Output	<20 secs	<40 secs	34 secs	20 secs	<15 secs
Document Description Language included	-	-	-	-	YES
Flash ROM	-	-	-	-	YES
Upgradable Firmware	-	-	-	-	YES
IC Card Slot	YES	-	-	YES	YES
Scalable Resident Fonts - in HP L/J III Emulation	-	8	8	0	8
Resident Bit-Mapped Fonts	11	14	14	16	14
AGFA Intelligent Scalable Font Technology	-	YES	-	-	YES
HP LaserJet III Emulation Included	-	YES	YES	-	YES
EPSON FX Emulation Included	YES	-	YES	-	YES
IBM ProPrinter Emulation Included	-	-	YES	-	YES
Standard Tray Capacity	100	70	100	200	100
Protective cover on standard tray	YES	-	YES	YES	YES
Cost per copy**	1.65p	2.00p	1.71p	1.64p	1.65p
Min-Max Paper Weight in gsm	60-157	60-105	60-120	60-131	60-157
Able to print on OHP Film	YES	YES	YES	YES	YES
Able to print on card (157gsm - Manual Feed)	YES	-	-	-	YES
Standby - Noise Level	<40dB	31.7dB	<35dB	38 dB	<38dB
Printing - Noise Level	<50dB	43.3dB	<46dB	50 dB	<48dB

**As quoted by manufacturers - 2/4/92

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FULLY HP LASERJET III™ COMPATIBLE

400dpi 2Mb RAM 6PPM

FLASH ROM UPGRADEABLE!



OCTOBER '92



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RICOH LP1200

6 PAGES PER MINUTE
Using a straight paper path

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- **LAYOUT** Document Description Language
- **SERIAL + PARALLEL PORTS**
For connection to PC compatibles and other computers
- **1 YEAR ON-SITE WARRANTY** Next working day response

Silica Systems are pleased to introduce the revolutionary, new Ricoh LP1200. It has all of the specifications that you would expect to see in today's most technically advanced laser printers, plus a unique additional feature which places it far ahead of the competition - FLASH ROM. This 'Future Proof' technology protects the investment you make when you buy a Ricoh LP1200, as it enables you to keep up to date with new laser firmware developments. FLASH ROM is an area of memory inside the LP1200 which holds the printer's controller instruction firmware. If new firmware is developed, updated printer command languages etc, can be downloaded into this memory. Other manufacturers would require you to buy a new printer! Fonts, macros, graphics and additional emulations can also be stored in FLASH ROM, or on removable, industry standard FLASH ROM IC cards. The new Ricoh LP1200 is the only laser printer to offer this FLASH ROM facility. The LP1200 comes with a 100 sheet A4 paper tray (letter and legal trays also available as extras) and the facility to feed single sheets of paper and card up to 157gsm. An optional extra universal feeder provides the facility to automatically feed up to 150 sheets, from sizes of 98mm x 148mm to 216mm x 356mm in size at weights of up to 158gsm. The universal feeder also feeds up to 15 envelopes, overhead transparencies and labels automatically.

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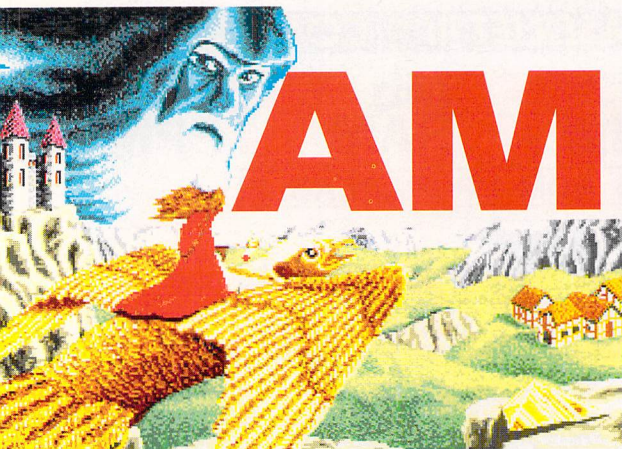
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AMBERSTAR

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You know it's gonna be a weird sort of a day when you wake up in a graveyard. There you are cold and damp surrounded by swirling mist and mossy gravestones, looking like an extra from a Wacko Jacko video. So you stumble into the nearest town, not knowing what on earth Mrs Fate is going to choose to throw at you next.

Amberstar is a pretty standard role-playing game in which you have to explore the land of Lynamion in search of 13 pieces of a magic talisman – the amberstar – and defeat the evil Marmion. Along the way you are promised a variety of adventures, puzzles and battles, aided and abetted by the people you manage to recruit on the way.

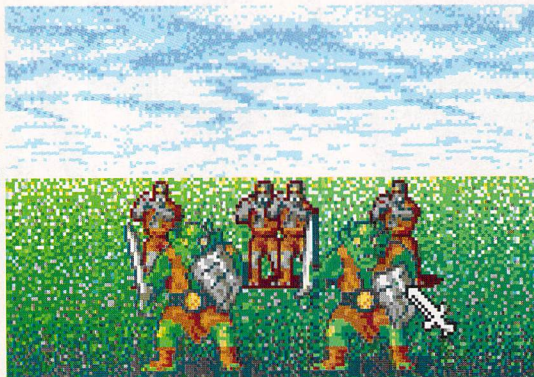
As you explore each of the towns you discover inns, traders

■ Hello there lads, my, you have changed. Last time I saw you were in Teenage Mutant Hero Turtles..."

and houses you can enter to search for clues or to buy and sell goods. An automapping function plots out the places you have visited and highlights the key features. However, you can't use the map to move around the town and have to slog it out in 3D mode, bumping into walls and running down dead-ends.

White elephants

The clues and various other items of booty are scattered all over the place. These are of varying usefulness and you do tend to end up carrying a whole load of useless junk around with you in the vague hope that somehow, someday it might be useful – for example,



many of the weapons and spells you pick up can only be used by characters of a certain class.

Once you escape into the country – on the steed you bought earlier from a horse-trader – it's time to stick on the hacking jacket and horned helmet, for lurking in the woods are all kinds of baddies hoping to relieve you of your life. This time you get a bird's eye view of events, so you can watch yourself gallop through the forest, career in the mountains or plop into the deadly sea.

All the characters' functions are controlled either by the mouse, the keyboard or a combination of both and the



■ When Cliff Richard sang "In The Country," why did he forget to mention the blood-curdling screams emanating from the forest?

control-mechanism is reasonably slick. The manual is a bit vague when it comes to the functions the various button icons perform, but you soon get the hang of all the different menu options. The graphics are good and the sprites are well-drawn, though things tend to get a bit fuzzy in bird's eye mode. One major drawback has to be the amount of disk-swapping you have to do, although the game can be installed on a hard drive if your ST has 2.5MBytes of free memory.

Verdict

Amberstar is a rather old-fashioned RPG which lacks the atmosphere and intensity of Ishar. It's also overpriced at £29.99.

Despite this, it's incredibly addictive. With over 150 locations to explore and plenty of chaps to chat to and fight with, this game is going to take you some time to complete, but if you haven't got a hard drive all the disk accessing is likely to drive you bonkers.



■ "I'd like a studded leather overcoat and a bottle of wee, please." "Why?" "I'm on my way to Reading Rock Festival."



■ "The chemist's? Yes, take the first left, then the third right, enter the Bala temple, go down the stairs underneath the priest's robe. Be careful - he's still wearing it."



Where are Marillion?

After he left Marillion, Fish released a laughable solo LP and disappeared off the face of the earth. Disappointed that ordinary mortals could not understand his pseud poetry, he travelled to Lynamion and opened a chain of fast-food restaurants called Fish's Chips. Eventually, he was knighted by Lynamion's elders and became Sir Marillion. He was brutally murdered several years later by a gang of balding Orks, called the Phil Collins Trio and buried in the graveyard of Twinlake. As a tribute to the great man, the game's programmers have composed a suitably prog-rock soundtrack to accompany your adventures.



■ Looks like we've stumbled into the old folk's home, again. Quick somebody, knit a tea cosy.

BY **ROB MEAD**

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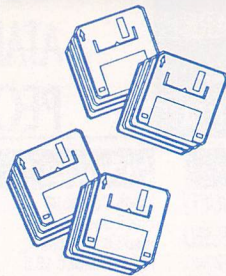
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■ And so - hurtling in from outer space came the *Crystals of Arborea*. No one knows why.

SOFTWARE HOUSE: DAZE
PRICE: £25.99

Hands on wallets - it's a compilation. From the people who brought you the superb *Ishar* - cheated in this month's Gamebusters on page 49 - comes *Magic Worlds*, three RPGs from those lovely, if not wizened old crone and mysterious mumbling-obsessed, French Silmarilis people. All three games have been reviewed in *STF* before and so, if you're the dedicated sort, you probably know instantly what they're all about and how they fared. If not, read on.

Storm Master

84% in *STF* 33

There are these two islands, see. One's called Eolia and the other one's called Sharkaania. True to the spirit of this kind of thing, these two islands have been at war for quite a while. You're the leader of Eolia and, by issuing commands to the members of your council, you must attack and completely destroy the other place. To do this, you just click on the desired fella and, as if by magic, his icons appear. But, it isn't all one-sided baddie-bashing. Occasionally the Sharkaaniens do something dastardly in return and, because this simply won't do, you have to retaliate.

Before that, you need to design your war machinery and manage your soldier-training and



financial affairs efficiently. Then, you can attack by sending over your flying devices and blasting the Sharkaaniens into oblivion. *Storm Master* is a god game - but a slightly tweaked one. It features superb graphics, terrific sampled sound and a dramatic and slightly guffaw-inducing wind-raising ceremony - check it out.

Crystals Of Arborea

78% in *STF* 22

This one has much in common with *Ishar*. It features an almost exclusively 3D perspective and sees you taking charge of a bunch of dudes wandering around the countryside. The evil Morgorth has returned. These evil ones always return, don't they? But - why this one? Well, the four magic crystals that once held him prisoner have disappeared and now he's getting down to some serious rampaging and generally wreaking havoc over Arborea. So - surprise, surprise - it's you who has to do the right thing and ramble about the land, recovering crystals and restoring law, order and good ol' family values.

At the beginning, you can select a ranger, warrior or magician and determine their



■ Whipping up the winds in *Storm Master*. This man believes that by regarding the world with an intense sense of natural, elemental wonder, he can create awesome wind storms from scratch.

qualities, strengths and weaknesses. Of course, you have to pick 'em carefully if you're going to succeed. Gorgeous 3D graphics with incredible detail and a handy overhead view of the whole playing area - just in case you're having trouble finding your bearings. *Crystals* is *Ishar's* slightly less polished grand-daddy.

Dragon's Breath

92% in *STF* 10

OK, let's get 'em over with... This isn't an insult for the halitosis-afflicted. Nor is it the result of a particularly awesome biryani.

Right, well - this one's set in the magical kingdom of Anrea. Why do the names of all these magical kingdoms have to begin with begin and end with the letter "A"? Hmmm.

Three players get to take part - a mixture of humans and STs, or just all of

the same. A game turn lasts for a month - well, not literally - and then the others get a go. You need to use dragons to search for the elusive - and inevitable - pieces of a magic talisman. You start with one dragon and can go to an incubation room to plant dragon eggs. Here, you adjust the heat and condensation levels and generally look after the egg until it hatches, spewing forth its fire-breathing inhabitant. All this heat and energy all costs money - and you get that by taking over villages and charging tax to the proles. But, set the tax too high and you risk a bloody uprising. There are plenty of other ways of making money, but we're not going to tell you what they are.

Pieces of the talisman are scattered around and you occasionally have to approach some beastie and severely beat him around the face and neck to get to them. The object is to end up with a dragon guarding each section of the talisman. *Dragon's Breath* is easy to get into, but the spell-casting is complex and needs a bit of experimenting. Lots of aspects to the gameplay make it a versatile and varied game.

VERDICT

A brilliant compilation with a bit of something for every taste, provided you like role playing games, of course. Excellent value for money, too. Even if you own one or two of the games, get it now.

BY **ANDY LOWE**



■ "So I said to Harry, I said... Harry, what time is this bloody bus, due? And he says, 'I'm sorry, do I know you?' How we laughed."



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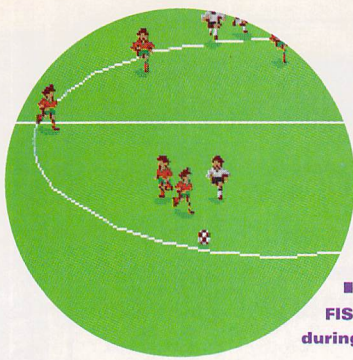
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STRIKER

■ Midfield scrambles like this were common at one time, but FISA ruled that motorcycles should be banned from the pitch during international matches.

SOFTWARE HOUSE: RAGE
PRICE: £25.99

Sensible Soccer, Kick Off 2 and, er, Sensible Soccer. The list of decent football games on the ST is endless. So what chance does a rank outsider like *Striker* have?

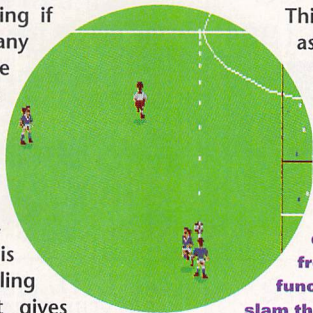
The game covers an exhaustive number of international footy teams, ranging from Albania to Zambia, well almost. These teams act as skill levels because, obviously, you've got a much better chance of winning if you play as Germany or Italy. There are also three different difficulty settings.

Striker goes for an oblique look at the action. It's a sort of behind-and-above view which is both visually appealing and works well. It gives you an advantage when you're playing up the pitch, because you can view slightly further into the distance.

The sprites are bigger than those that are in *Sensible Soccer*, and they're well animated too. A coloured disc indicates the player you're currently controlling – all you need to do is guide this chap over the ball and run like hell with it. For the most part, the ball stays with the player unless he does a spectacularly violent manoeuvre. Simply hit the <Fire> button to

pass and shoot, and there's a neat after-touch facility too.

What sets *Striker* aside from the other games is its speed – the players rush around like mad things. It's like watching one of those films from the early 1900s. Sliding tackles are the fastest moves on the pitch, and a slow player lagging behind a sprinter can catch up by sliding into him. It's a good idea, but rather unrealistic because the slider moves at about five times the speed of anyone else on the pitch.



■ The dotted line indicates the direction you take the free-kick. Using this function it's possible to slam the ball into the back of the net, using a banana-shot redolent of the 1930s.

get into the right positions and even the goalie has his head screwed on the right way when it comes to attempting to anticipate the shots.

Of course, there are fouls, sendings off and bookings, but strangely enough your ST seems to do most of the nasty stuff – it manages to clock up more yellow cards in one game than Vinny Jones does in a season. Each



■ Formations and settings are, as Graham Taylor can tell you, another hassle which you don't want to address in that tense time before an important game of rugby, sorry, football.

player also has an injury meter – if a player is repeatedly tackled hard he eventually limps off and has to be replaced. Over the course of a rough game, the injury readings on most of your forwards tend to creep dangerously close to the red line.

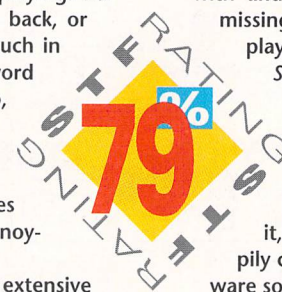
Yet another strange feature is the scoreboard thing at the bottom of the screen. This displays various messages, pictures and little animations as the game progresses, to give you an indication of how well you're playing. For example, if you pass back, or dither around too much in the mid-field, the word "Boring" flashes up, and if you make a hash of a scoring attempt, a clown bounces up and waves his arms around annoyingly.

There are extensive options for customising the game, from setting pitch type and weather conditions to turning on the replay function which shows

you the last goal scored over and over again until you switch it off.

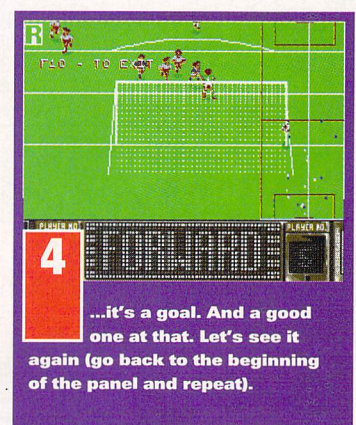
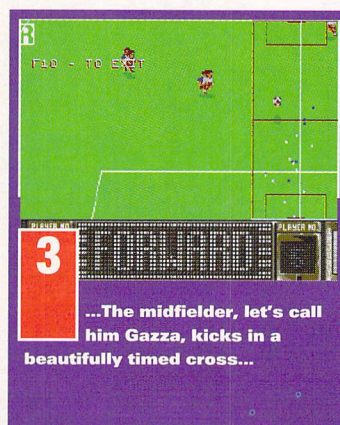
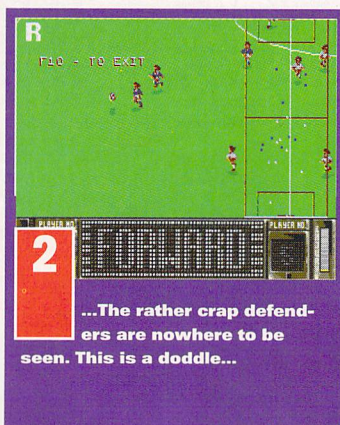
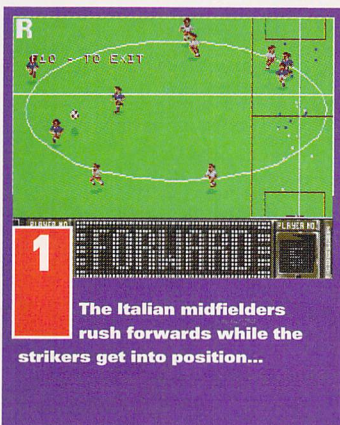
VERDICT

Striker is an excellent game, with more of an arcade feel than its rivals. It's smooth, realistic and very playable. The only real flaw is in the game's speed – it's wonderful if you like a fast, frenzied game, but those sliding tackles are just ridiculous. The options and selection menus give you many facets to change and fiddle with and the only thing that's missing is the names of the players on each team as in *Sensible Soccer*. In game-play, the Sensible's game has the edge, but *Striker* isn't far behind. It has a different feel to it, so the two could happily co-exist. If you're a software soccer fan, get this too.



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Over the years, the **ST FORMAT** team has reviewed thousands of games. We've all got our favourites, but we've put our differences aside to bring you our utterly biased list of the 50 best ST games ever. It's our humble, some might say affectionate, nod to 1992 and to those games we've known, loved, cherished, coveted, erased, jettisoned, beaten and cast aside. Check it out next month, you won't believe what we've picked for number one!

ST
FORMAT

"If you take the life of games seriously, if you take your nervous system seriously, if you take your sense organs seriously, if you take the energy process seriously and if you take your ST seriously, you must turn on, tune in and blast off."

With apologies to Timothy Leary

ST FORMAT ON SALE
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Why pay £30 for a game when you can get one that's as good for a fraction of the price? Jon Pillar hasn't got a clue either, and that's why he couldn't tear himself away from his ST last night. He even missed Madonna – and couldn't care less

REDUCED

SWITCHBLADE 2 FROM: GBH GOLD PRICE: £9.99

Why do heroes bother, eh? It's obvious that no matter how thoroughly they defeat their arch-enemy, no matter how many anti-matter grenades are lodged in the villain's belt before he's blown out of the airlock, he's bound to return in the sequel.

Switchblade 2 is no exception. Havoc, big cheese of the first round, has returned from the seemingly-dead to wreak – er, himself on the Cyberworld with his new gang of far nastier henchrobots. It's up to the only living descendent of the original hero, Hiro, to save the day. Again. In an extension of the first game, he has to explore the various levels of a vast subterranean base, fighting his way from room to room, battering down walls to move from section to section and taking on the very best of the very worst.

Verdict

Well, it's a console game: lots of platforms, lots of

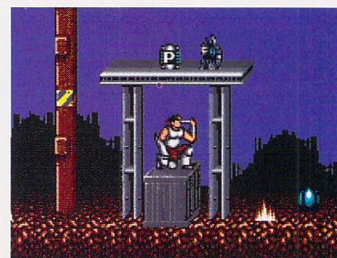
Switchblades are illegal now, of course. On his passport, Hiro lists his occupation as "Folding comb officer, no, really." It doesn't help.



power-ups and lots of shooting. They've retained the clever gimmick of the first game – that new rooms are hidden in darkness until you move into them, so you're never quite sure if that big black area of the screen is as innocent as it seems.

The difficulty level has been expertly pitched – you might find yourself progressing quite a way, then stumbling over several nasty booby traps mid-scoff. The various elements – rogue robots, hidden passages, wall-mounted lasers and bonus icons – have been shuffled and mixed to such an extent that the game's nearly always

surprising. The whole thing's terribly playable and packed with chunky addictive goodness. Slick and smart.



Tragedy struck early on in the quest, as Susan deftly avoided a scampish robot but accidentally poked herself in the eye with a pencil with a rubber on the end.



SUPERCARS 2 FROM: GBH GOLD PRICE: £9.99

Every *Super Sprint* player, at some time or other during the game, has eyed the car in front and wished for a bonnet-mounted machine gun to deal out some swift tarmac justice.

Supercars 2 fulfils that dream in spades, with the contestants armed with everything from homing missiles to smart mines. Combat – er, sorry, racing takes place on large scrolling tracks, and as

with the estimable SS, it's a case of first past the flag takes home the pot (and uses it to buy even larger and more unfriendly weapons). In that junk mail competition phrase, up to two players can take part, in which case the screen politely splits vertically and draws an attractive line down the middle to make things clearer.

Verdict

A while ago, some American company made the bizarre move of importing little

devices that fitted on the dashboard of your car and made excitingly dangerous noises when you pointed them at other motorists and pressed the trigger. *Supercars 2* is built along the same lines.

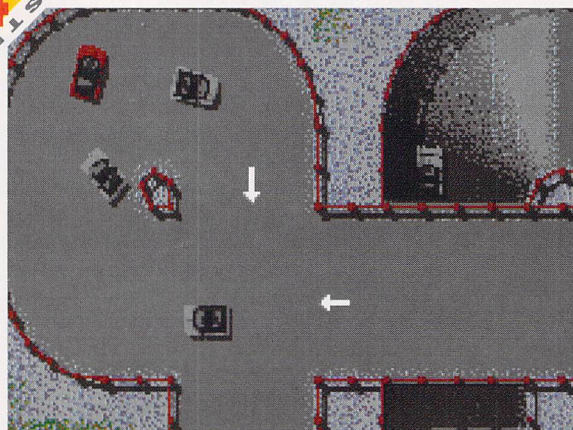
It's incredibly satisfying to throw your car around a sharp bend, swerve around the pack leader and rake him with missile fire, causing a large explosion and probably a devastating – but exciting to pyromaniacal onlookers – pile-up. Everything's geared towards this

violent destruction – it's not the winning or the losing that matters, but the taking apart.

However, if you do decide to play properly, the game still delivers a hefty dollop of fun. Those rascally ST drivers play for keeps, hedging you into the crash barriers and cutting you off on the bends, while the increasingly complicated tracks add to the manic action. Long term you're likely to tire of it, but for a quick buzz on a quiet afternoon, *Supercars 2* is hard to beat.



It's all terribly violent. Here we see Player One taking on the entire enemy pack single-handed, while Player Two cowers under a bridge and has an anxiety attack.



The dreaded Devil's Roundabout – if you look closely at the island in the centre, you can see a geometrical representation of Old Nick, comically shaking his fist at the passing drivers.

TO CLEAR

WORLD CHAMPIONSHIP BOXING MANAGER

FROM: GBH
PRICE: £7.99

Whatever your personal feelings about boxing; whether you feel it's a barbaric and exploitative sport that has the same effect as a particularly nasty gang fight, or whether you're just plain stupid, be assured that *World Championship Boxing Manager* features a marked lack of on-screen violence.

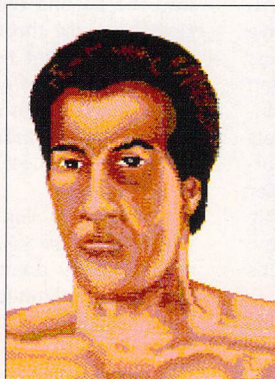
As the somewhat disreputable manager of a group (clutch? casualty ward?) of boxers, you spend most of your time

flitting between a selection of menu screens, setting up matches, making sure your boys are in the peak of condition as well as juggling the finances. The actual fighting occurs surreptitiously in the wings, reported blow-by-blow by a couple of ring-side commentators. Thank goodness for that, eh?

Verdict

What a stunning idea. Take a footy management game, throw out the footy and insert a couple of prizefighters instead. The most amazing thing is that it works.

■ All my boxers are named Norman Lamont. And all of them have lost money. It's the nearest thing you can get to political satire in this caption, matey.



STAMINA	AVERAGE
DEFENCE	EXCELLENT DEFENCE
ACCURACY	SHINGS A BIT
STRENGTH	LACKS POWER
DURABILITY	TAKES A GOOD PUNCH
CUTS	COULD BE DOWNFALL
SPEED	SLUGGISH
NAME:	NORMAN LAMONT



■ Good old Norman! He fights hardest when he's on the ropes. (He actually came back to win this match by a knockout, believe it or not.)

Concentrating on one boxer, or taking a camp of up to five, really gets you involved with the pixelated pugilists and adds to the suspense during the punch-ups themselves.

Gameplay has, on the whole, been professionally tweaked to a high standard – you make all the usual training/financial/desperate life-or-death decisions with all the usual click-on-the-pretty-picture menus, but the whole things hangs together very well. You might find yourself cheering along enthusiastically when your

boxers manage to win – or even sob quietly into your woolly jumper when they crash defeated onto the canvas in the fifth round. Depends on what your temperament is really.

Possibly the only real complaint, apart from the speed of the thing (it's somewhere between sluggish and salted sluggish) is the mindbogglingly offensive animation of your buxom secretary as she retrieves the boxers' files. Apart from that, it's only worth a smack around the head or two, or something like that.

JAHANGIR KHAN WORLD CHAMPIONSHIP SQUASH

FROM: GBH
PRICE: £7.99

When it comes down to it, squash consists of shutting yourself inside a large plastic box with another person and a high-velocity rubber ball which spends most of its time out of your line of sight – a bit like the old school game Dodgeball, except for money and without the silly nicknames.

In this comprehensive game, you get the opportunity to take

on the world's best players, the world's worst players or your best friend, who, of course, may belong to one of these groups. Or not. There are several options to deal with if you fancy taking the sport sim route rather than the quick race-around-the-quadrangle approach – ball speed, tournaments, a choice of rules and so on. But no matter how long you spend tripping through the colourful menus, you've got to step into the plastic box and brave the flying bungy.

Verdict

Well, the menus are brilliant. And the game? Well, that's a bit dubious. Until you get your bearings it seems to consist entirely of winning points on services, leaving you plenty of time to appreciate the nifty animation and smashing touches such as the little players legging it across the court to retrieve a dead ball. The problem isn't with the controls – it's just that the action's so fast you really have to be on your toes. It's almost as if the

game was designed with the pre-cognitive element of society in mind – if you want to cross the court in time, you have to be in motion before the ball hits the wall and rebounds. Still, once you've got into the swing of things it's jolly good fun batting around the place and accidentally jumping in front of your opponent at difficult moments. You might not enjoy ST squash as much as ST tennis, but, as a whole new ball game, it's a decent enough number.

■ And, as we can see clearly from this satellite shot, McCready has made contact with Thin Jim and passed over the uncut diamonds in return for a plane ticket to Portmeirion. The squash game is a ruse.



■ Jahangir Khan's Philosophical Squash – the world champion seeks to prove that the red line does not exist, thereby robbing his opponent of the match point.

We all know the Lynx has great colours, though you might not believe it looking at this page.

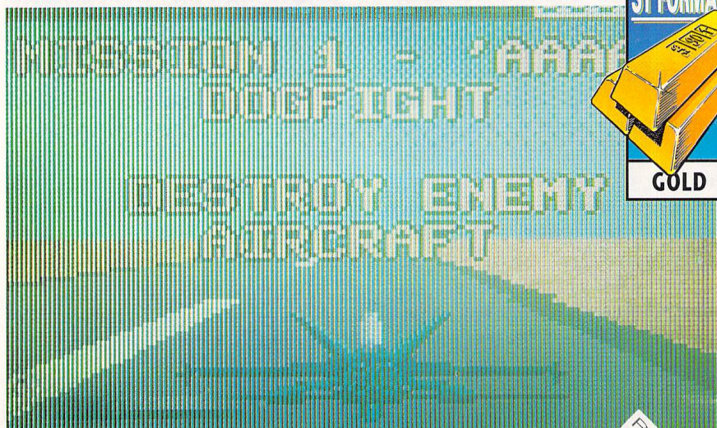
Andy Hutchinson gets clucky about blue screenshots and says they're not really like that

BLUE LIGHTNING

It's every boy and – sexually non-stereotyped – girl's dream to fly a top secret jet airplane. The Blue Lightning jet is a phallic love monster with the kind of manoeuvrability and fire-power that only a seriously frustrated games designer – who really rather enjoyed the Bay City Rollers' gigs in

Blackpool and Michael Rodd's greatest hour with the Twicky robot on *Tommorow's World* – can invent.

Blue Lightning is seriously brilliant. Right from the start, you're likely to realise this is a game you could spend hundreds of pounds on if it was



■ Sometime in the future we shall be capable of flying jet fighters thanks to psychic computers. The viability of this was established in 1956 by the Morris Minor owners' club.



ROBO-SQUASH

Here's a puzzling game. It's a 3D version of squash with a difference – it's not played against a wall, but against either your Lynx or another player at the other end of a ComLynx lead. You move a

bat around the zone trying to knock bricks out of a wall that lies midway between you and your opponent.

Of course, no game can be complete without a bevy of



■ What was the name of the flying robot dog in the *Battle of the Planets*, where did they live and what was their catchphrase when transforming? Answers by Fri 11 Dec.



LYNX

Last month we brought you news of eight Lynx games. This month we check out some older titles and a couple of stunning brand new ones. If you've got a Lynx and can think of

any notable titles we've missed, drop us a line at *ST FORMAT*, 30 Monmouth Street, Bath, Avon BS1 2BW and let us know. We'd also like to know if you think we should continue to cover the Lynx.

in an arcade, let alone on a Lynx. The designers have invested a brilliant amount of detail in the game and it shows in every lovingly carved pixel.

The idea is to battle your way through nine missions. These missions range from blowing up convoys to performing daring night-time runs into enemy territory. For each mission you have the same weapons: an endless supply of bullets not to mention 40 sidewinder missiles. Your on-board computer picks out targets and by tapping the Option-1 button you let loose a sidewinder and it just happens to go swiftly up the exhaust port of some unsuspecting tank commander's pride and joy.

The gameplay is extremely frantic and massively satisfying. You throw *Blue Lightning* around the sky with gay abandon, unleashing salvo after salvo of missiles. That is until you run out of them, of course, at which point you wish you'd saved a couple for

the squadron of jets that are frighteningly bearing down on your six.

It's the speed of this game which is its most stunning feature. The wonderful texture-mapped planet zips along below and jets bear down on you without slowing down. When you zoom up into the air and hide among the clouds or fly through a forest, there's a brilliant feeling of freedom. If things get a bit too hectic for you to cope with, you can perform a wicked barrel roll which throws off the most efficient heat-seeking missile.

Blue Lightning has a password facility so you can join the action at any point. The game's shelf-life is unlimited – even when you've completed all the missions, you're still going to want to plug this in and play it for a quick blast. There's no finer advertisement for the Lynx than *Blue Lightning*. It's one seriously excellent testosterone blastorama. Load, lock and unleash.

power-ups and *Robo-Squash* has a rather tasty batch of them. For example, if you hit the right brick you're able to enlarge your bat or slow down the ball. This adds to the excitement a bit and makes life considerably easier. There are some amusing touches within the game, too – when you miss the ball, it splats paintball-style on to the screen obscuring the screen a bit, making the next return even harder. The gameplay is surprisingly fluid. It's quite easy to judge where the ball is going from the shadow it casts on the

walls. It's also possible to direct the ball in much the same way as you do in *Arkanoid* – you can either let the ball clip your bat or you can move the bat as the ball hits it. Because there's no long-term goal to complete in *Robo-Squash*, its appeal should be fairly enduring. It's one of those games you can dig out whenever you fancy a quick blast, although it's infinitely better in its two-player incarnation. *Robo-Squash* is like a Mars bar – a bit dull after a few years, but still satisfying when you all you want is a quick bite.



Squash, anyone?

The name of the popular racket and ball court game invented in 1817 at Harrow school actually gets its name from a species of the cucumber family with large funnel-shaped flowers and not (as is widely believed), from the name of the headmaster, one Bernard St Smythington Squashberry. History books should be amended today.

ROUNDUP

SCRAPYARD DOG

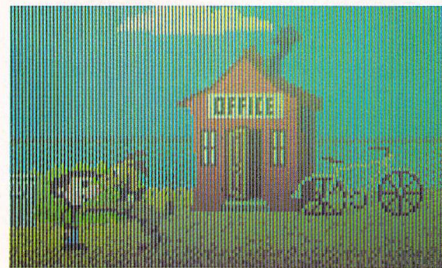
Walk sideways and lob cans at dogs and birds. If those were all the instructions available for this game, you'd still be able to complete it. Still, simplistic gameplay sometimes works, so why knock it? The game's set in – amazingly enough – a scrapyards, so you can clamber over, under and round knackered cars, mucky tyres, vague rusty orange huts, dustbins and dogs in raincoats. No, wait, the dogs in raincoats are your

enemy – you can dispatch them with cans.

Scrapyard Dog is peculiarly addictive. It's a jump and judge game where all that matters is your ability to leap by the toes between platforms while rattling off a few er, cans. You progress by memorising what happens at which point and being prepared. In other words, you die a lot. It can't be helped – you just have to learn the

route. Graphically the game's OK. The scrolling is smooth, the sprites are vaguely pleasant while the backdrops are imaginative and bright – the sound doesn't exactly push the Lynx to its limits, however.

A game to get your teeth into, but only if you're the type who really gets excited by platform action.



■ Handy hint: don't let your dog drag his bum across the sitting room floor. It smells.

RAMPAGE

Gloriously brilliant idea for a game, this – you have to take control of a mutant psycho monster which has grown to alarming proportions and kicks the hell out of buildings. At the same time you must keep its energy levels high by encouraging it to munch on delicate tasty-looking humans. Play against your mates and kick the fur out of them to make it even more interesting. It's simple, childish and enjoyable.

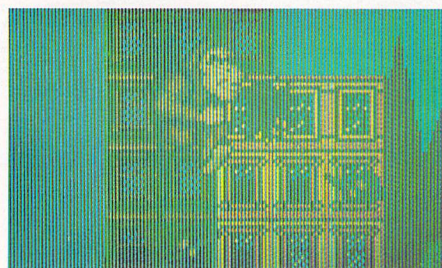
The level of difficulty at each stage is determined by the num-

ber of buildings on the level. To complete a level you have to do a Fred Dibner on each skyscraper – climb up it, then bash it to bits by punching it. Once a building's been drilled with plenty of holes, it shatters and then crumbles to the ground.

The game is actually quite difficult. Soldiers take potshots at you from windows, and helicopters drop bombs on you. There are also various noxious substances which kill you should you happen to

eat them by mistake. It's also extremely easy to fall off the buildings – a trick that even mutant monsters can't get away with unscathed.

Rampage isn't that much cop, though you're likely to find it's alright – but nothing more – for a while. The two-player version is slightly more amusing, but it's not worth £30. Spend your money on *Blue Lightning* instead.



■ Quite possibly the best track to come out during the '70s was *The Monster Mash*. It had a fab video that was filmed in a cemetery. *Kung Fu Fighting* was good, too.

HARD DRIVIN'

Or, extremely hard drivin'. All the *Hard Drivin'* games, on whatever format, have been a load of rubbish. What it is exactly that makes the game so incredibly unplayable is a bit of a mystery, but it must have something to do with the chronically sluggish controls.

This is a kind of racing game. You can drive around either a stunt track or a race

course. The general idea of the game is to (a) finish first, (b) survive with your car intact within the time limits and (c) stop yourself from repeatedly bashing your head against the table because the whole thing is so annoying.

That awful sluggish control completely ruins this cartridge. You spend so much time spinning around

on the grass watching the competition speed away over the horizon that you realise how Mark Thatcher must have felt. The graphics are pretty, the idea's good, but it's all completely screwed up by the control system.

Hard Drivin' is not a good game. Avoid like the plague.



■ I failed my driving test three times. The same man failed me each time. And he failed my dad.

BILL AND TED'S EXCELLENT ADVENTURE

Or rather more accurately, *Bill and Ted's* rather tedious waddle around some particularly uninspiring landscapes in-search-of-nothing-in-particular adventure.

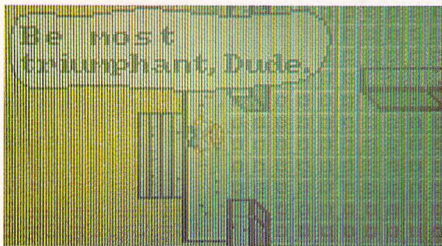
What a let down this is. Given a licence with a reputation like this, a brilliant game could have been produced – complete with radical samples – but no, what you get is a dreadfully dreary affair. If *Blue Lightning's* anything like Monte Carlo, then

this is akin to Newport Pagnell. (And *Blue Lightning* is like Monte Carlo, incidentally. Strange but true.)

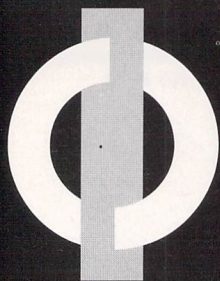
The actual cartridge is based more on the cartoon of the film than the film itself. You've got to toddle around time zones picking up useful objects and avoiding nasties which definitely have something against you and aren't afraid to show it. And that's it. *Bill and Ted* is com-

pletely devoid of any long-term interest. It is dull, insipid and lacklustre. The graphics are bland, the sound is grey and the gameplay is utterly, completely and totally lacking.

If you only destroy one game in your life by stabbing it repeatedly with the serious end of a sharp cutlass, make it this one. 'Nuff said? **stf**



■ Bogus, duff, bland, tedious and utterly crap. Comments by my teacher on my first English essay apply equally well to this, er, game.



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To get behind all the hype about the Falcon we sent Clive Parker off to Atari UK (behind the railway station) with a bag full of ST floppy disks to see what he could find. He toiled into the night, and ended up with a belt buckle, a brooch a dinosaur shaped tie-pin and a small pile of bits and pieces that was once a 32-bit computer

A HAWK AMONG DOVES



The Falcon! Is this the machine that is to revolutionise the home computer market? There has been so much talk, hype and general guesswork being quoted as "facts" over the last few months about the new flagship of the Atari fleet that we decided to see what the Falcon030 is actually like to use. We also took this opportunity to get some impressive detailed pictures of the inside of the Falcon, so you can see exactly what all the fuss is about.

First impressions

The Falcon lives in a standard Atari STE style case with dark grey keys, although a different case design is on the way. It seems likely that a Mega ST or Mega STE style machine is also being developed – probably something that can use the same basic motherboard as the Falcon model but with a new case. This means that there would be none of the usual costs involved with designing a new circuit board – the new version of the Falcon would be identical except for the external case. The keys are all marked with German legends includ-

ing umlauts and other non-English keytops. This was because the machine we were testing was a German pre-production model; sales started in Germany at the end of the second week in October.

The first batch of UK machines were shipped into the country in the middle of October by air freight, and sea freight shipments follow about the time this issue of *STF* goes on sale. The machine should therefore be available now.

The Desktop

The Falcon's Desktop environment is virtually identical to TOS 2.06 and TOS 3.0, with all the familiar enhancements that are now com-



■ As you can see, the Falcon is, at first glance identical to the STE, only the darker keys and Falcon030 label give the game away.



■ The Falcon comes with a manual explaining the ins and outs of the new machine. It is a

good general introduction to the machine but needs more attention to specifics such as changing screen modes and resolutions.

monplace such as definable icons, the ability to launch programs from function keys and so on. The only major difference is in the selection of screen modes. Instead of the usual options of low, medium and high resolutions, you can also select the number of screen colours you want and choose whether to enable interlace or normal screen modes.

There are several cosmetic enhancements to GEM, the most noticeable being 3D sculpted buttons on menu options and a 3D look to window buttons such as the close, full, enlarge and scroll bar arrows. In all other respects TOS 4.0 is exactly the same as its predecessors. The file selector has also received the 3D treatment.

ST SOFTWARE TESTS

The first thing to remember is that the machine we used for testing was not a final production model, the final version of TOS 4.0 has to be finished and there are still a few things to be sorted out with the sound hardware to improve compatibility with the ST. Atari UK have never claimed that the Falcon would be downwardly compatible with the STE, they have taken the position that some ST software would be upwardly compatible with the Falcon 030.

We tried out a few ST games on the Falcon: *F-15 Strike Eagle*, *Populous 2*, *Cybernetix* and *Dungeon Master*. None of the games got as far as their intro sequence because the sound hardware was incompatible. We tested several serious packages tested

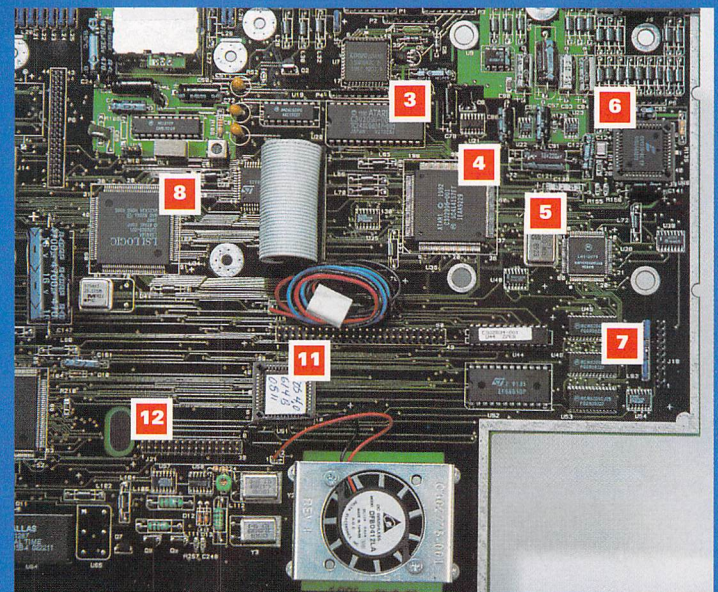
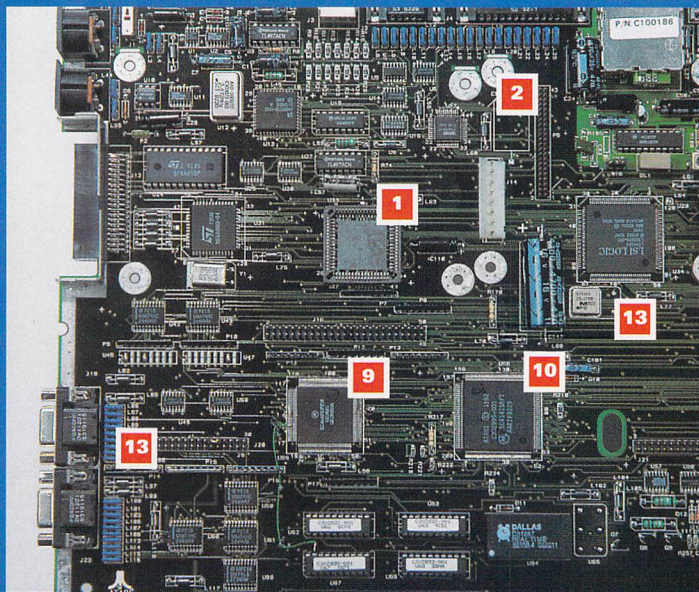
generally disappointing results. *First Word Plus* worked until we tried to import some graphics, at which point it bombed out. *That's Write* worked for a while, but when we imported some fonts the program froze up when we attempted to change a block. Similar results occurred with most of the programs we tried, including *Cubase 3.0*, *Cubase Lite*, *Notator* and *Feeling Partner*.

In the main, the software problems were likely to have been caused by the sound hardware glitch, although the dongles for *Cubase* and *Notator* may have contributed to their problems. Steinberg are working on Falcon software and are likely to release an upgrade so *Cubase* operates. The biggest sur-

prise was Daatascan Professional – because it is a hardware and software combination we expected this to fail. Both the cartridge and the software worked perfectly and we scanned in several pictures and saved them without any problems. Daatascan is, however, compatible with the TT, also a 68030 based machine so perhaps it was not so surprising.

Other successful programs included *GFA Basic 3.5*, *HiSoft Basic 2*, *UVK* and *Diamond Back 2*. Generally we were quite disappointed with the results of the software tests, although the Desk Accessories and AUTO folder programs we tried worked without problems.

REVEALED AT LAST!



1 Coprocessor socket for 68881/68882 Floating Point Unit maths coprocessor

2 IDE hard drive connector, the optional internal IDE hard drive connects to the main circuit board here

3 Ajax floppy drive controller, enables High Density 1.44MByte drives to be used with the Falcon

4 SDMA Sound/DMA coprocessor handles all the sound processing for the Falcon

5 Motorola 56001 DSP processor and 32MHz clock, to process digital info

6 CODEC chip, contains the 16-bit ADCs (Analog to Digital Converters) and DACs (Digital to Analog Converters) for the sound system

7 DSP Static RAM – this is where the Falcon is designed to store all its DSP programs

8 Custom Video processor – this enables the Falcon to have so many screen modes

9 Motorola 68030 chip. This runs at 16MHz and is the central core of the machine

10 Custom Motorola manufactured chip containing glue, MMU and Blitter capabilities combined

11 TOS 4.0 ROM, now a tiny custom designed square package which contains all language versions and MultiTOS capabilities

12 Connection points for memory cards to plug into

13 Connection points for expansion bus cards to plug into, can be used for 386SX PC emulation boards, DMA coprocessors

The hard drive's inside

The Falcon uses an internal 2.5inch IDE 64MByte hard drive which is mounted centrally at the rear of the case, a ribbon cable connects the drive directly to the main circuit board. This makes internal hard drive replacement a very simple matter – all you have to do is unplug the old drive and plug in a new one – and about time too.

External hard drives can be connected via the standard SCSI 2 interface on the back of the machine – there have been murmurs about a

SCSI to DMA lead connector to enable standard ST hard drives to be used with the Falcon, but this has yet to be officially confirmed. Of course, if your drive uses an ICD host adaptor, then it can be plugged directly to the 50 way SCSI connection completely bypassing the host adaptor. Some ST hard drives are provided with SCSI connections as standard – the Protar Progate, FAST drives from Atari Workshop and Ladbroke Computing drives are among these.

There is a range of options when you buy a Falcon, but it seems

pointless buying a machine without a built-in hard drive unless you already have an Atari or SCSI hard drive that you can use with it. 2.5inch IDE drives are quite expensive at the moment although the fact that IDE drives are used extensively in PC compatible machines is likely to mean a swift drop in price – many PC based hardware add-ons typically halve in price by the time they have been out for about nine months.

With suitable software it is possible to drive standard PC style CD-ROM drives via either the SCSI2 port

or the DSP ports, so there is a definite multi-media look to the machine.

Memory

You can buy the Falcon with a choice from three sizes of RAM board: either 1MByte, 4MByte and 16MByte. In the 16MByte board only 14MByte is available for applications because 2MByte is used by the operating system for housekeeping and other system management. The two smaller memory boards have their full capacity available for use by software applications. The actual boards



■ The lid removed from the Falcon – you can see the power supply, IDE hard drive and 1.44MByte floppy drive. The rather small black box that you can see in the centre of the machine is the 64MByte hard drive – the only connections to the Falcon are by means of a power lead and a ribbon cable.

DSP56001 PROCESSOR

The DSP (digital signal processor) is what makes the Falcon the powerful machine it is. The DSP is a specialised co-processor designed specifically to process digital signals at high speed separately from the main 68030 processor. This enables the 68030 to get on with the main job of running the system and dealing with general processing work, while the DSP works directly on the data, whether it is sound,

video or a more esoteric process such as a software modem. The processor is fully programmable and has 96K words of zero wait-state RAM built in (very fast indeed) to speed all processing operations.

Running at an internal clock speed of 32MHz and combined with the other custom chips such as the 16-bit DACs (Digital to Analog Converters) and ADCs (Analog to

Digital Converters), the SDMA (Sound Direct Memory Access) chip and the Multiplexer coordinating the entire process, the DSP gives the Falcon the edge over any other machine at the same level.

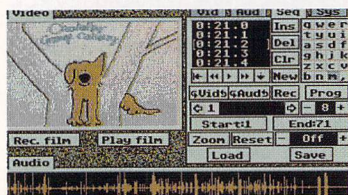
DSP chips can be found in top of the range machines such as SUN SPARC work stations and the NeXT Cube costing thousands of pounds.



MULTI-TOS

One of the great strides forward for Atari computers is the advent of MultiTOS, a true multi-tasking operating system designed to run on the Falcon and other Atari 030 and 040 machines as standard. It was not, however, ready to run on the machine we tested. The only machines we have seen MultiTOS running on so far have been TT030 machines both at Atari and on the Hisoft stand at computer shows. However, Atari are making sure that MultiTOS is fully tested before it is released with any machines, and a ROM based version is not likely to appear before early 1993. Falcons purchased without MultiTOS ROMs will be able to load a hard disk based version of the operating system when it becomes available. Multi-tasking is only feasible on machines with 4MBytes or more of RAM – installing it on a 1MByte machine would leave no room for software to run.

are of a simple elegant design and use standard 4Mbit RAM chips, every two chips make up 1MByte of RAM. The 16MByte board has 32 of these chips, 16 mounted on either side. Connection to the main circuit board is by two IDC connector sockets on the RAM card which mount on to two sets corresponding pins on the



■ This is a sneak preview of what the Falcon can do with Videomaster from Microdeal. This picture is from the Roobarb demo and consists of both sound and video samples.

motherboard, you can unplug the boards if you want to replace them and upgrade the memory. Atari have not announced any prices for the memory boards but they expect prices to be favourably comparable to SIMMs memory. They also expect third party manufacturers to produce competitively priced memory upgrades. Atari aren't

using SIMM based memory boards in the Falcon so as to save space inside the machine and keep manufacturing costs down.

Floppy drives

All new Atari machines have had 1.44MByte high density disk drives as standard for some time now, so, of course, Falcons each have one installed. The major advantage of having an HD floppy drive is so that you can store much larger files on floppy disk and transfer them to other machines.

With disk intensive software such as video grabbing and sound sampling becoming more common, it's important to be able to store files that are bigger than 1MByte. Because the Falcon disk format is PC compatible, you can transfer files between machine formats.

There is no external floppy drive port on the Falcon. This is not the big problem that most people perceive it to be because the main use for a floppy drive with the Falcon is to transfer software to the hard drive. With the internal hard drive there is no longer any need for a second floppy drive – after all, the only reason that there are two drives on a

PC compatible machine is so that both 5.25inch and 3.5inch disks can be read.

If you have a hardware based disk copying device like Blitz or Spectre GCR, the Macintosh emulator, you might lose out because of the lack of an external floppy drive. That's rather a shame because Spectre run-

Atari UK have taken the position that some ST software will be upwardly compatible with the Falcon 030

ning at 16MHz on the Falcon would have been something worth seeing, since Mac applications run twice as fast as Mac Pluses. It is also worth noting that Spectre GCR is compatible with the TT, the other 68030 machine. There have been hints of a possible new Mac emulator that is to be fitted internally in the Falcon, although details of this have been

WHAT A SEXY BEHIND

There are major differences on the back of the machine the new ports from left to right are as follows.

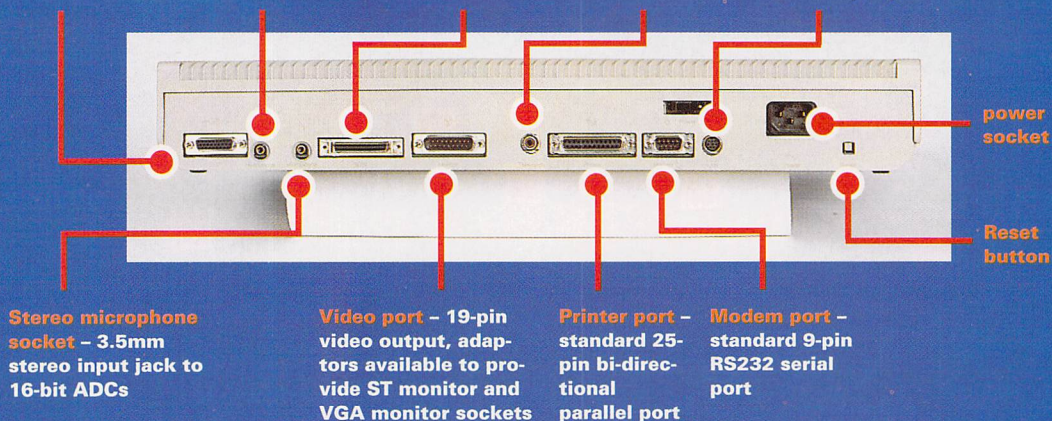
DSP port – direct access to the DSP chip for audio, video and other digital processing

Stereo headphone socket – 3.5mm stereo output jack from 16-bit DACs

SCSI 2 port – connection to hard drives, CD-ROM and other SCSI devices

TV port – standard TVs can be connected to this RF output

LAN – Local Area Network, used for linking machines together to share data and peripherals



Stereo microphone socket – 3.5mm stereo input jack to 16-bit ADCs

Video port – 19-pin video output, adaptors available to provide ST monitor and VGA monitor sockets

Printer port – standard 25-pin bi-directional parallel port

Modem port – standard 9-pin RS232 serial port

power socket

Reset button

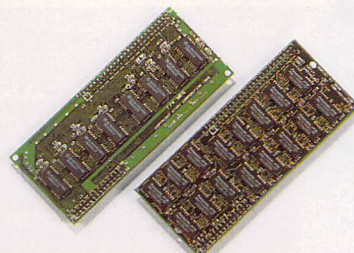
somewhat vague to say the least. The Falcon has the capacity for quite large circuit boards to be mounted on the internal expansion bus which is made up of two rows of connections. This can have boards plugged on to them by means of standard IDC connectors similar to that used by the IDE drive connection.

Possibilities for boards to plug in here include graphics cards expansions, JPEG and MPEG graphics compression processors, PC and Mac emulators and perhaps even greater memory expansion cards.

It sounds wonderful

The sound capabilities of the Falcon are outstanding, with its built-in 16-bit DACs and ADCs – you can record and play back sound at better than CD quality. Combined with software using the DSP56001 processor, amazing effects can be achieved with sound samples and other sound data. The direct to disk recording software from D2D Systems (☎ 0223 420252) is almost complete, the program just needs cosmetic touches to its look and feel. The final version of the program should be ready by the end of November and is expected to cost around £300. One simple idea that

■ Falcon memory boards come in three sizes, here we see a 4MBytes and a 16MBytes board side by side. The only difference between the boards is the number of chips installed on each.



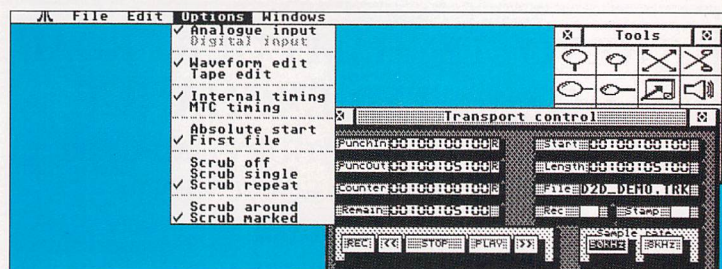
What language?

The TOS 4.0 ROMs installed are identical in all Falcons worldwide with all the different language versions contained on one chip. The appropriate language is enabled on each Falcon automatically in the assembly plant depending on what country the current production run is destined for. The installation program can even enable a different language in a ROM depending on what time of day the ROM is fitted to a machine.

SOUND PROBLEMS

The sound chip is mapped in a different way on the Falcon to the ST, so that every time an ST program calls a sound routine on the Falcon, a bus error occurs causing the program to crash. This means all ST games software fails when it runs on the Falcon, as does a lot of serious software. There seems to be a difference of opinion on the fix for the sound problem – sources in the US

told us that the problem is being rectified, while in Europe the feeling is that the sound chip is going to remain as it is in the production models. We at STF hope that this is not the case. We must stress again that the machine we used is not a production model and there are bound to be differences between this one and the version which is to go on sale.



■ This is the first screenshot of the Falcon D2D hard drive recording system, and, while it's not a wildly exciting picture, D2D is the forerunner of an avalanche of professional quality music software under development for the Falcon. Here you can see what the demo version of the program looks like.

makes a world of difference to the machine is the inclusion of an internal speaker. This has turned out to be a brilliant idea because it means that any standard VGA monitor without speakers can be used with the Falcon so everyone can get the best possible sound and graphics from their system.

Uses for the sound system could be for sound tracks and sound effects in games, voice synthesis within software (for blind people?) or even as a sound effects studio for amateur theatrical productions or dubbing sound effects on to home videos. These are all viable uses for a sound system with these capabilities. One great sound utility supplied with the Falcon is a speaking clock Accessory – and you can turn it off if it gets too much for you.

General feelings

The machine looks, feels and handles exactly like an STE with TOS 2.06 installed. All the

tests we performed with ST software were made in either ST medium or high resolution on an SC1435 monitor. We couldn't find any problems at all with the operating system and all the Falcon specific software worked perfectly. There are a few problems to be sorted out with ST sound compatibility, but these should not be a major setback to the release of the machine.

With over 100 developers that we know of already working on Falcon software and hardware, the future prospects for the machine look pretty good. Atari need to promote the machine vigorously – starting now – and ensure that supply meets demand. This means getting the machines in the shops as soon as possible and making sure that the boats keep them coming.

The Falcon 030 is an excellent machine with brilliant capabilities and it well deserves to succeed – let's just hope it does. **stf**

TECH SPECS

68030 Motorola CPU running at 16MHz 3.84 MIPS
32-bit data and address bus
68881/2 optional FPU coprocessor
1, 4 or 14MBytes RAM
Motorola 56001DSP running at 32MHz 16 MIPS
DSP connector for direct connection of 19.2K baud modems, voice mail systems, direct to disk recording
Internal expansion for additional processors
Eight 16-bit digital audio DMA channels, sampling at up to 50kHz
Stereo 16-bit digital DMA audio input/output
SDMA sound/DMA coprocessor
1.44MByte MS-DOS compatible floppy drive
Optional internal IDE hard drive

ALL THE DISPLAY RESOLUTIONS

Much noise has been made about the graphics capabilities of the Falcon, and the display has to be seen to be believed. The 16-bit true colour mode displays up to 65,536 colours on-screen at once from a palette of 262,144 possible colours. This means that pictures displayed by Falcon are indistinguishable from a colour TV picture.

The Falcon can display all three ST screen modes on the Atari SC1224 and SC1435 monitors, along with 256 colour and true colour modes – these display modes can also be displayed on a colour TV. High resolution on a colour monitor or TV is interlaced and a little flickery, but is still a lot better than using a mono emulator on an ST. This means that any software designed to run in ST high resolution mode (640 x 400) can run on any colour monitor and even on a TV.

Another improved graphic mode is called overscan. Overscan increases the size of the picture by a factor of 1.2 so it fills the whole screen, resulting in no more black borders around the edges of the screen. Overscan cannot be set from the Desktop, but there is an XBIOS call that programmers can use when writing software. You can see the resolutions available with each option in the table below:

VGA refers to a standard VGA monitor.

TV refers to both TV and Atari SC1224 monitor

40 column modes	
four colours, normal mode TV	320 x 200, two planes
16 colours, normal mode TV	320 x 200, four planes
256 colours, normal mode TV	320 x 200, eight planes
True colour, normal mode TV	320 x 200, true colour
four colours, interlace mode TV	320 x 400, two planes
16 colours, interlace mode TV	320 x 400, four planes
256 colours, interlace mode TV	320 x 400, eight planes
True colour, interlace mode TV	320 x 400, true colour
four colours, normal mode VGA	320 x 480, two planes
16 colours, normal mode VGA	320 x 480, four planes
256 colours, normal mode VGA	320 x 480, eight planes
True colour, normal mode VGA	320 x 480, true colour
four colours, line-doubling mode VGA	320 x 240, two planes
16 colours, line-doubling mode VGA	320 x 240, four planes
256 colours, line-doubling mode VGA	320 x 240, eight planes
True colour, line-doubling mode VGA	320 x 240, true colour
80 column modes	
two colours, normal mode TV	640 x 200, one plane
four colours, normal mode TV	640 x 200, two planes
16 colours, normal mode TV	640 x 200, four planes
256 colours, normal mode TV	640 x 200, eight planes
True colour, normal mode TV	640 x 200, true colour
four colours, interlace mode TV	640 x 400, two planes
16 colours, interlace mode TV	640 x 400, four planes
256 colours, interlace mode TV	640 x 400, eight planes
True colour, interlace mode TV	640 x 400, true colour
two colours, normal mode VGA	640 x 480, one plane
four colours, normal mode VGA	640 x 480, two planes
16 colours, normal mode VGA	640 x 480, four planes
256 colours, normal mode VGA	640 x 480, eight planes
four colours, line-doubling mode VGA	640 x 240, two planes
16 colours, line-doubling mode VGA	640 x 240, four planes
256 colours, line-doubling mode VGA	640 x 240, eight planes
Atari low resolution	320 x 200 16 colours
Atari medium resolution	640 x 200 four colours
Atari high resolution	640 x 400 two colours

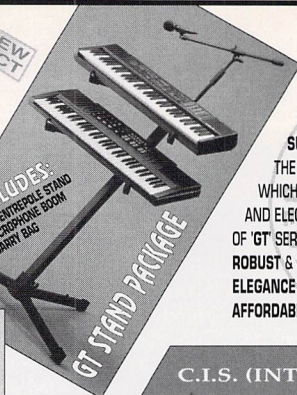
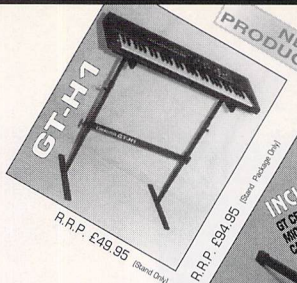
These demos were on a slideshow program which displays pictures of almost photographic quality on the Atari monitor and Videomaster from Microdeal (☎ 0726 68020). This is a software and cartridge combination so video and sound can be captured in real-time at up to 12 frames per second; a Falcon with 14MBytes of RAM can sample complete *Tom and Jerry* cartoons. Videomaster created the intro to both *Stingray* and the *Roobarb* cartoon.



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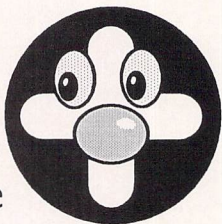
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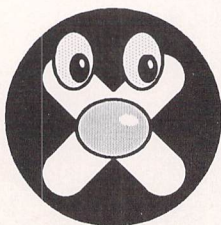
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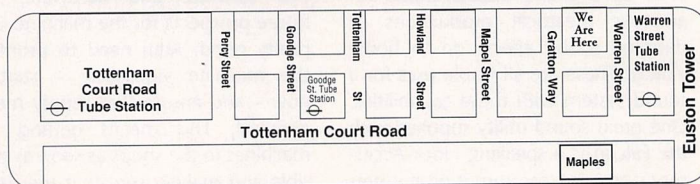
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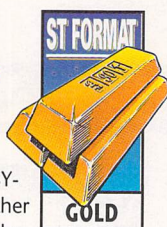
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■ The SY-35 is so sexy that it never has to stay home on Friday night!



PRICE: £599
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The Yamaha SY-22 was a rather natty synthesizer which was clucked over a lot and roundly cheered because it had a brilliant selection of sounds at an excellent price. Consequently it's rather a happy day when its successor looks set to improve on the original.

The SY-35 is an FM tone generating synthesizer with a full size, five octave keyboard, so you don't have to fiddle around trying to hit the right note as you do on some other synths. The keyboard is also kitted out with after-touch and velocity controls. Velocity gives the synth piano-like responsiveness – when you hit a key harder, the note sounds harder. After-touch means you can add vibrato when you've hit the note by pushing harder or softer on the key.

Any synthesizer is graded by the kind of built-in sounds it has – from these sounds you can build others that you want. The SY-35 has 128, consisting of 64 editable internal sounds and 64 non-editable preset

SY-35

voices which you can use as waveform building blocks. If you run out of space inside the Yamaha, you can always add an external memory card or two to give you limitless room for new sounds.

What a fine voice

The 64 preset voices within the SY-35 cover nine different kinds of "real" sound. These are acoustic piano, electric piano, keyboard, brass, strings, bass, wind, plucked and chorus. The editable internal sounds are initially set to a range of 64 very synthesized tones with names like Power, Drama or Elegant. If you like synths to sound synth-like, then this is the wave bank you're going to want to spend most time with.

You can modify the editable sounds by using one of the 128 preset advanced wave memory (AWM) waveforms or the 256 preset FM waveforms. However if you want something a bit different, the sounds can be treated to a spot of vector synthesis – one of the SY-35's strongest features.

Vector synthesis enables you to combine either two or four sounds together to create a single one. You

do this with the joystick that's on the left hand side of the keyboard. By using this control you can pick four waveforms (sounds) and meld them together to create sweeping effects of limitless form. You can then record and play back these new sounds as you want by pressing any of the notes on the keyboard.

VERDICT

The problem with most synthesizers is you have to specialise – you have to choose between either a certain range of sounds, waveforms or editing parameters – you can't usually have everything. The SY-35, however, manages to combine most of the popular features in one very attractive synth. The multi-play function is a useful way to create song setups, while the vector synthesis function enables you to produce sounds which are peculiar to your songs.

The built-in sounds are well designed, though the string-like warm tones are a lot better than the harsher guitar ones. The SY-35 even has built-in drum sounds, so you don't have to resort to a separate drum machine. This

machine is a flexible keyboard with a wide range of sophisticated functions and on top of all that, it comes at a very reasonable price. If you've become used to home keyboards rather than synths, then this is a good machine to start out with – it's the perfect start-up synth for the home MIDI setup. **stf**

BY ANDY HUTCHINSON

DAMNED TUNES

Synthesizers have had a formative influence on music since the late '70s. Unfortunately, that influence hasn't stood the test of time too well. Here's a list of the duffest synth songs ever...

ABC – Look of love
BREAK MACHINE – Street Dance
COLONEL ABRAMS – Trapped
FLOCK OF SEAGULLS – If I had a photograph of you (As something to remind us?)
HAROLD FALTEMAYER – Axel F
JEAN MICHEL JARRE – Oxygene
KAJAGOOGOO – Too Shy (Erm, hush hush eye to eye?)
KIM WILDE – Kids in America (Looking out a dirty old window?)
MC MIKER "G" AND DJ SVEN – Holiday Rap (We're going to ring rang a dong for a hol ee day)
MIKE OLDFIELD – Arrival
NIK KERSHAW – I won't let the sun go down on me (Apocryphal or what...)
POINTER SISTERS – Neutron Dance
RAH BAND – Clouds across the moon (Ugh, ugh, ugh, uggghh)
TARZAN BOY – Baltimore (Dreadful summer hit of 1986)
WHISTLE – (Nothing serious) just buggin' (They weren't kidding)



■ The Yamaha SY-35 has a 128 preset advance wave memory and 256 FM waveforms. It can also do 0-60 in three seconds and comes with a brown leather pannier as standard.

THE SYNTH AND THE SEQUENCER

The SY-35 has a mode called multi-play. If you use your ST and sequencer with the synthesizer, then this is the option you should be using

The multi-play option enables you to choose eight sounds which you can play back simultaneously from your ST. To solve the problem of having to input these sounds each time you power-up, there's the option to store up to 16 of them in battery-backed memory.

Each of these multi-play setups can be accessed at any time, so you could have a different one for each song in your repertoire. However, the SY-35 has 16-note polyphony – as a result, if you use all eight of the multi-play sounds, then each voice can only play two notes at once.

Of course, if you only use one note on a couple of tracks, that frees up a couple of multi-plays for several chords on another track. Setting up multi-plays can be quite daunting, but if you follow the manual you're likely to find it's actually fairly rudi-

mentary. You have to set a different MIDI channel for each sound, so that when you load the appropriate song into your sequencer, you have the ability to assign each track to a different MIDI channel. By combining interesting sounds it's possible to create some really original effects.

If you do want really original noises you can treat each sound to a different effect such as distortion, echo or delay – if you wanted to you could even make your tune sound like you're playing in a hall – or perhaps a sewer!

IN ANALYSIS

If you've got a problem, you analyse it to work out why it's a problem and what you can do about it. If you've got an ST you lavish tender loving care on it by buying it accessories and software. But how does your ST feel about this? We take a look at some of the latest add-ons and whether they are likely to improve your ST's quality of life. Care to join us?

STREAMLINED PAGES

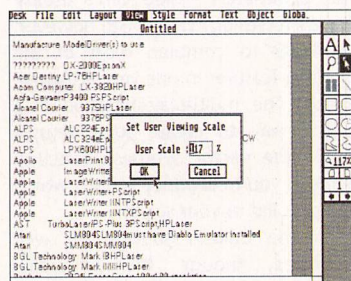
PAGESTREAM V2.2

MACHINE: 1MBYTE STs, HIGH OR MEDIUM RES
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PageStream, the desktop publishing software from SoftLogic, has been around for a couple of years, and was previously known as *Publishing Partner*. It has occupied the middle ground in ST desktop publishing, with more features than GST's *Timeworks Publisher*, but cheaper and easier to use than *Calamus*.

A few things have changed, however, *PageStream* has now reached v2 with a handful of enhancements and *Calamus* v1.09 has come down dramatically in price to be cheaper than *PageStream*. The latest version of *PageStream* has just been released, following on from v2.1 which was launched over a year ago. Many of the new features are "bug fixes" and improvements to make it run more reliably and



■ As well as the usual view modes (full page, actual size, half size and so on) you can now set any level of zoom you want, like that very popular little number 117% magnification, just as we're using here.

smoothly, but there are also a number of visible changes to the appearance and user interface of the program. The main icons have been simplified and streamlined, making them more logical and straightforward to use, and SoftLogic claim to have made thousands of changes to the programming to improve "stability and interface uniformity," as only Americans could put it.

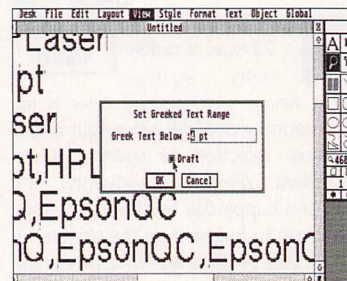
The upgrade kit for *PageStream* 2.2 comprises a completely new set of four double-sided floppy disks and a 12 page adden-

dum to the main manual. You have to install it from scratch because most of the new files and programming is completely new.

It's not a very good idea to use *PageStream* unless you have two floppy drives, and it runs very much better and faster on a hard drive ST system, even if you've installed extra fonts and the like. V2.2 can load files created with v2.1, and documents and fonts may be freely switched between them. The format for macros has been changed though, so you have to re-enter these.

The screen fonts for Times and Triumvirate (*PageStream*'s version of Swiss or Helvetica) text have been changed to improve their display, and some of the problems with using Compugraphic fonts have been fixed. A brand new PostScript printer driver is provided which is claimed to be faster and better, enabling *PageStream* to output to PostScript laser printers and typesetting machines. The slowness of screen redrawing was always a problem with *PageStream*, but the new version has noticeably quicker redraws and scrolling.

With a number of new modules to accept text and pictures

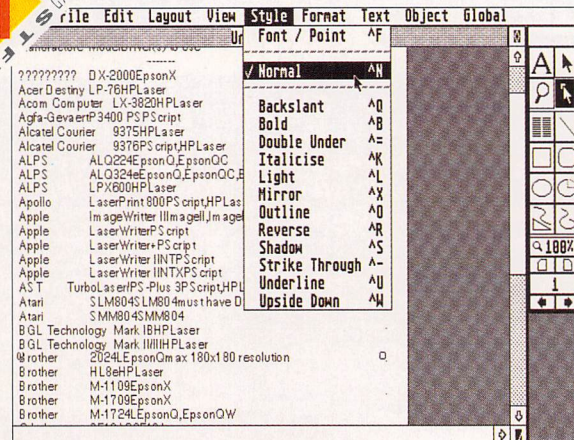
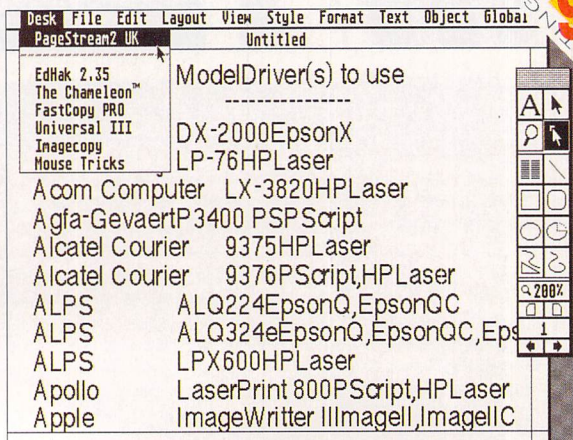


■ Redrawing speed can be improved further by setting a new draft option in the Greeking menu - this replaces outline fonts on-screen with bitmaps for a speedy display without affecting printed output.

from a wide range of sources, *PageStream* v2.2 has certainly become a very comprehensive program, capable of extremely professional results. With compatibility claimed for all versions of TOS including the forthcoming MultiTOS quicker and easier use and improved performance, *PageStream* must now be considered as the best value in colour desktop publishing for the ST.

BY PETER CRUSH

■ The new toolbox in *PageStream* has been redesigned and includes two new tools. You can move the tools around on-screen or set the GEM window of your page to "Full" to toggle the tools off.



■ There is a good range of styles available within *PageStream*, and you can apply these to any font you want to use. The text on-screen is an exhaustive list of the printer drivers provided.

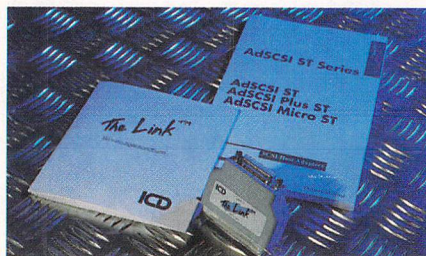
THE MISSING (UNTIL NOW) LINK

THE LINK
MACHINE: ALL STs
PRICE: £59
FROM: GASTEINER
CONTACT: 081 365 1151

Just to be different, the designers of the ST decided, in their wisdom, that instead of equipping the machine with a standard interface for hard drives like most other computers, they would fit a special non-standard one. So to connect a hard drive to an ST you have to use the Atari DMA (Direct Memory Access) port instead of the common SCSI (Small Computer Systems Interface) as used by many off-the-shelf hard drives. This means you can only get hard drives from a few specialised suppliers. Consequently ST hard drives have been very expensive compared with those for other more mass-market computers. Although ST hard drives have become more affordable now, they are still dearer than, for example, PC contemptible hard drives. It has been possible to build your own hard drive by getting a special adaptor that

takes the ST's DMA output data and processes this to provide a SCSI output which can connect to a standard SCSI hard drive. This board has to be mounted in a casing, supplied with power so it's a job for an experienced soldering iron wielder. But a new device – the Link – changes all that, claiming to connect any ST, TT, ST Book, or Falcon to SCSI hard drives, floptical drives, or magneto optical drives CD-ROM drives.

The Link is innovative in that it functions as a DMA to SCSI adaptor, yet the whole thing fits into a small grey plastic gizmo which looks like a printer plug. The cartridge plugs into the hard drive's 25-pin SCSI input socket and is secured with wire clips like those on printer input ports. The ST's DMA output lead plugs on to the back of the Link where it is secured via screw-in connectors. Gasteiner can supply a DMA lead for £5 when you buy it with the Link. Apart from ensuring both the ST and the hard drive are turned off before you make the connection, that's all there is to it. All



It doesn't look very exciting, but this small grey gizmo transforms your ST's non-standard, scurvy old DMA output into the industry standard SCSI format, thus enabling the use of a wider range of more affordable hard drives and other storage devices.

the necessary circuitry is inside the Link – in fact, it's all contained on one chip which draws its power from the SCSI port, and there are no external controls. Supplied with the Link is the ICD hard drive utilities software on a floppy disk complete with a manual. This package contains everything you need to format and partition your hard drive, and the whole process is described completely and comprehensively. Some useful programs, Desk Accessories and utilities are detailed in the manual and included on disk, so even an absolute beginner should be able to set up the system fairly easily. Getting hold of suitable hard drive mechanisms is straightforward,

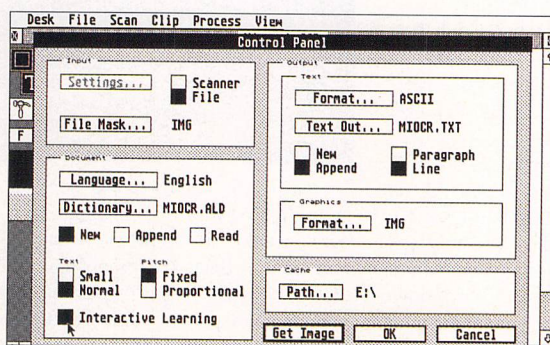
and Gasteiner have a range of these to save you hunting around. For example, a modest 20MByte hard drive mechanism costs £99, right up to gargantuan 650MByte drive at £499. You also need a case and power supply, Gasteiner can also supply these for £89. Or you may locate your own mechanism already cased either as a second hand unit or from discount suppliers. The Link must be the easiest way of "doing your own" hard drive, and, if you can get hold of the other bits and pieces cheaply enough, you can tailor them to make your own system for a bargain price.

BY PETER CRUSH

WELL READ

MIGRAPH OCR
MACHINE: 2MBYTE STs WITH HARD DISK
PRICE: £179
FROM: GASTEINER
CONTACT: 081 365 1151

How did you learn to read text? It's quite a complex affair really, and depends on the eye and brain being able to scan and recognise sentences made up from words which are made up of letters of varying shapes, sizes and font styles. Although most people can do this fairly easily by the time they leave primary school, to



One of the most important bits in OCR's menu is this control panel where you set up a range of options like the name of the textfile that is to be output when the scanned-in text has been read.

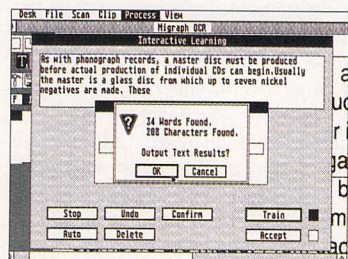
get an ST to accomplish the same task might have the teacher in a bit of a tizz. However, USA based software house Migraph have come up with a solution which requires a lot of computer brain power in the form of a 2MByte ST with a hard disk. The program "reads" printed text from a page and translates it into a textfile you can use in a word processing or desktop publishing application – pretty useful if you want to save yourself lots of re-typing!

To take advantage of Migraph's OCR (Optical Character Recognition) you need a hand scanner and a powerful ST system. You first have to scan the text to be "read" with either

Migraph's own scanner, or the more affordable scanners from Golden Image or Alfa Data which are also compatible with the program. In fact you don't need to own a scanner, because Migraph's OCR can import and work on any IMG or TIFF file, even if it originated on another computer such as a PC. Scanning can also take place directly from within the OCR software; when you have some text on-screen you can select the portion of it you want to process by drawing a re-sizeable frame around it. The frame does not have to be a rectangle – it can, therefore, cope with text which may have an illustration in it. OCR can recognise some 20 com-

mon typefaces, and can be "trained" to read new ones via its interactive mode which requires some assistance and input from you. Text between 10 and 18 points in size (there are 72 points to an inch) is best scanned at 300 dots per inch (dpi), but smaller or larger text can be dealt with by scanning at 200 or 400 dpi. The program cannot cope with major variations of size within the text, for example a large sub-heading among a chunk of smaller body text would confuse it completely.

Migraph have a reputation for high quality software, and OCR is no exception. Unfortunately, the price of the package and the high specification of the ST system required puts it rather out of range for most of us – it's into the realm of the specialized power-user. However, OCR is a superb program, it works fast and smoothly and is user-friendly. It could be a great tool for authors who want to input their typed manuscripts into a word processor, for instance, and could soon earn its keep at publishers' or typesetting and DTP bureaux.



What a damned clever piece of software – it read the whole thing correctly, now you just have to save the text to disk. By the way, OCR is multi-lingual, with a choice of language dictionaries.

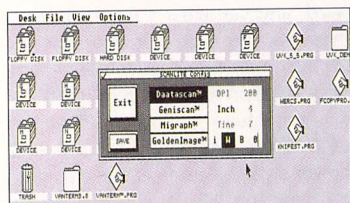
BY PETER CRUSH

SCANTASTIC

SCANLITE

MACHINES: ALL STs
FROM: LADBROKE COMPUTING INTERNATIONAL
PRICE: £20
CONTACT: 0772 203166

This is a program and Desk Accessory which has only one possible market, owners of hand scanners who use DTP or graphics programs extensively. It is a small scanning program that can be run as a Desk Accessory



■ The ScanLite setup menu, just click on your scanner type then choose your other options. A small "i" indicates that compressed IMG files can be created and a capital "I" means normal IMG files are saved.

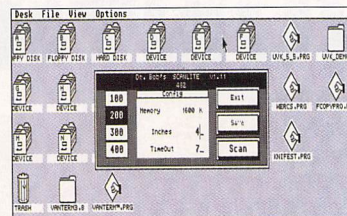
from within GEM programs. Someone realised that you sometimes need a hand scanner to make a scan of artwork or clip-art while in the middle of working on an important document – sometimes it can be very awkward to exit the DTP application and load up the scanner software.

At the moment only high-end DTP programs like *Calamus 1.09N* have built-in scanning options, and even this is usually dedicated to expensive flat-bed scanners rather than the more popular hand scanners. It is much more convenient to have the Accessory loaded and ready to use – you're likely to find yourself using graphics packages and scanning images from within them. The saved IMG file can be loaded into the package you're working with, then manipulated – even Atari's *Hyperpaint 2* program has better graphics functions than most scanning software (except Migraph's *Touch-Up* software) and a lot of time can be saved

in this way. The software is simple to configure and use. You select one of four hand scanners, either Daatascan, Golden Image, Geniscan or Migraph. Other options possible are for normal or compressed format IMG files, white or black background colour while scanning and selection of bit-plane or multiplane colour systems on the TT or Falcon. All options can be saved to a definition file to load next time you use Scanlite.

Another menu enables the dpi scanning resolution to be selected, along with the length of scan and a timeout option to turn off the scanner after a preset time interval. This saves the LEDs from being on for too long and overheating. A small configuration program is also included to set aside a memory buffer for the software to store the scanned image – you need a minimum buffer size of 32K for this.

The whole package is easy to set up and run, if you are using a DTP package or a scan-



■ From the scanning menu you select the relevant number of dots per inch, the length of the scan and the timeout period (in seconds).

ner, then the fact that the instruction manual consists of a single A5 size page of information is irrelevant. You don't need instructions to use this – that's how easy all software should be to use. We tried *ScanLite* using both the Daatascan and Naksha scanners with excellent results, and both the Daatascan scanner and ScanLite software worked with the Falcon. Recommended and inexpensive.

BY CLIVE PARKER

MEGA FLOPPY

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CONTACT: 0772 203166

Ladbroke are producing a new type of drive for the ST, the floptical. Looking exactly like a standard 3.5 inch floppy drive, the floptical promises mass storage of data for just over £1 per MByte, with 21MByte 3.5inch disks costing £24.99. Of course, you also have to take into account the initial cost of the floptical drive, but once you have your first half a dozen disks the cost starts competing favourably with traditional hard drive prices.

Think of the convenience – you can now keep all your

DTP files on a single 21MByte floppy, have another for all your MIDI files, or all of your programming routines, or all your utilities and store and use them as you want. Back up your 100MByte hard drive on to five floptical disks – a 100 capacity disk box can potentially hold 2,100MBytes of data (2.1 gigabytes) – always assuming you can afford £2,500 for 100 floptical disks, that is.

Setting up the drive is simple – just connect the drive to your ST via the DMA ports and boot the system. The floptical is a SCSI device and uses an ICD host adaptor along with a new version of the ICD hard drive utilities and driver software. Because Ladbroke are selling the drive as an upgrade to an existing hard drive, the software is pre-installed. However, to install it yourself you just run the installation program provided with the ICD software. Once the drive is installed and the icon is on the Desktop you can click on it and use it as a



■ If you look at this hard drive you can see it has what looks like a floppy drive built in. In fact, it's a floptical drive and that floppy disk can hold 21MBytes of data.

normal drive. We used the floptical drive from Ladbroke constantly for over a week, with no problems saving and loading data. The manufacturers of the disks claim it is impossible to corrupt data on the disks, and we certainly found no reason to dispute this. Data transfer rates to and from the disk are slower than a hard drive at around 162.5K/s (1.5Mbit/s) and a seek rate of 65m/s.

In real terms, this translates at about four minutes to back up a 20MByte hard drive partition. In comparison, back-

ing up 20MBytes takes up to 30 minutes using the best back-up utilities and a standard 720K floppy; using the floptical disks this is reduced to practically no time at all – you just select all the files in a partition, drag them to the floptical disk then wait a few minutes. To restore a partition you simply drag the files back to their original partition – what could be easier? The final piece of icing on the cake is that the drive can read and write standard 720K and 1.44MByte floppy disks, in effect adding a third floppy drive and enabling high density disks to be used. Ladbroke are also selling built-to-order hard drive and floptical drive combinations – phone them for prices.

The base price is a little on the high side, but this is an excellent and reliable addition to the Data Pulse range.

BY CLIVE PARKER

A CHIMERA AMONG DRIVES

There have been floppy, hard, optical and CD-ROM drives for computers, and all are reliable and proven media for the storage and retrieval of data. Now there is a new type of drive becoming available for the ST, the floptical. Essentially, a floptical disk is a hybrid between a normal 3.5 inch magnetic floppy disk and an optical disk. The mag-

netic side deals with the storage of data while the optical part of the drive deals with the accurate location of data on the disk (see the multi-media feature on page 16 for more details of how a floptical drive works). The upshot of all this is that a normal sized 3.5 inch floppy disk can hold 21MBytes of data, with increased disk capacities of 40 and 80MBytes promised for the future.



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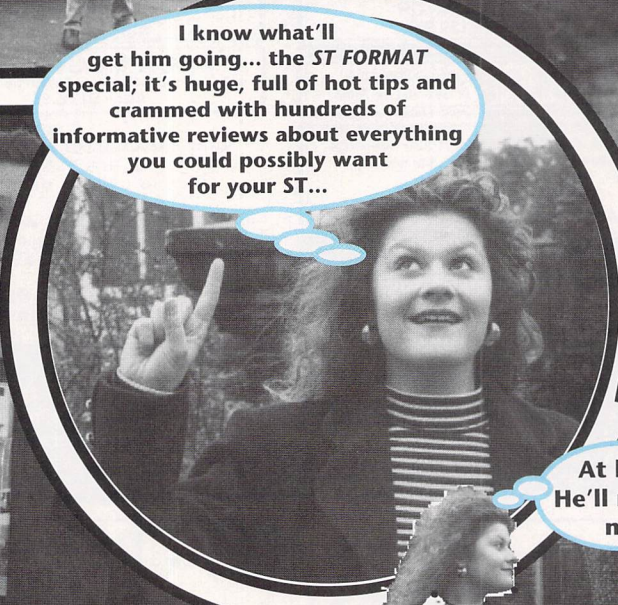
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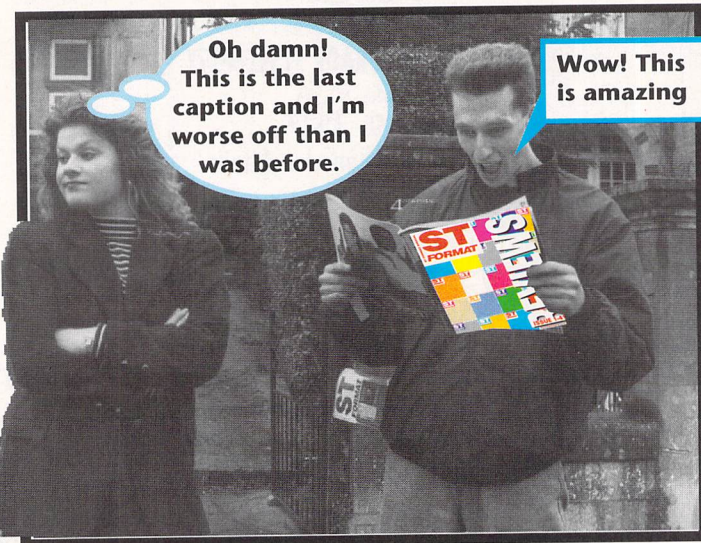


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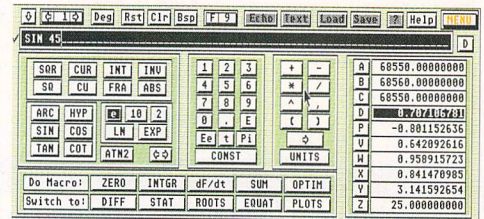
MATHS HELPER PAGE 6 - DISK ST 708

A handful of programs to make the number-crunching game run a little smoother. The matrix program cleverly called *Matricks* handles all the common matrix functions on one of the little fellas - the matrices, that is - up to 37 squares wide and deep.

Plot is another imaginatively-named program that plots functions and uses GDOS to give good hardcopy. It can handle all the usual sine and cosine business as well as things called Bessel functions and integration. The

Turing Machine Simulation is an - er, you guessed it, a theoretical type of computer developed to investigate and predicate calculus. There are also two calculators with a zillion functions each. *Sub Cal* takes readable expressions and the *Take Note Printing*

Pro grammers' calculator can store operations and do all sorts of fancy operations on binary numbers. These programs aren't really for the novice and, unless you're involved in



■ *Sub Cal* shows its form in the numbers game with powerful functions and an accessible interface.

actually doing your maths homework or maths is a serious hobby, this disk is unlikely to be much use to you - but if you're in the know it's the biz.

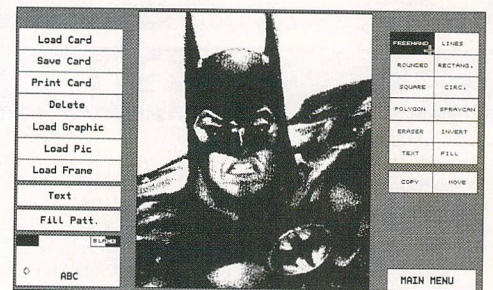
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pop-up, drop-down or on-screen menu options, so everything is point-and-click. Printing is supported on Epson and NEC printers with the promise of Atari Laser and HP Laserjet printer support if you register.

This is a great print utility, although unfortunately you do need at least 1MByte of RAM and a mono monitor.

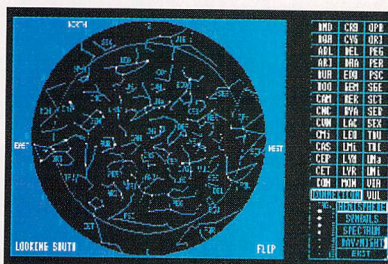


■ Create an - er, different card. This reads: "It's your birthday, fancy that - thought I'd greet you with a bat!"

EQUATORIAL ATLAS GOODMANS PDL - DISK GD1666

This is a clever program that'd be really handy if you're into astronomy as well as have an ST. *Equatorial Atlas* is a sky mapping program which displays the night sky as you can see it from either the northern hemisphere and the equator, and works in medium resolution. All 43 major constellations in the northern and equatorial sky are covered in the full version, along with about 1,600 individual objects.

Once you're viewing a constellation, you can select individual objects - the name of the star or galaxy is displayed at the bottom of the screen along with any interesting information. The cut down version gives you access to two thirds of the

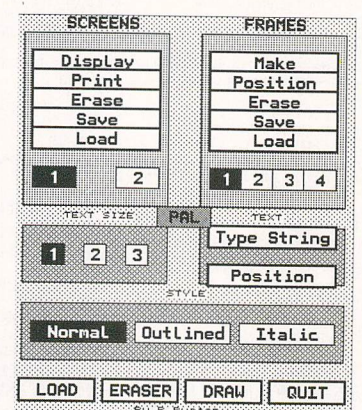


■ Space, the final frontier. Every constellation in the northern hemisphere can be displayed and studied with *Equatorial Atlas*. If you have the slightest interest in the stars, then this is an excellent program to add to your collection.

constellations if you have a 1040 and one third of them if you have a 520. For the full program you need 1MByte of RAM. It's £5 to register for the full version, so get writing those cheques.

UTILS 1 BUDGIE - DISK PRO 28

This is another in the Budgie UK productivity series of disks, now up to *Pro 28*. It's packed with a wide variety of utilities and comes with a booklet detailing the programs. It also includes a simple text editor called BQ-TXT that you can use to create small text files suitable for use as on disk READ.ME documents, though don't try using it to write your latest novel. Other programs include a document displayer, a MIDI sysex dump program, a program to automatically transfer a file to a RAMdisk on booting the system, a program to identify your TOS type, a program to convert *First Word Plus* programs to ASCII and a rather good database called *Basoon*. A mixed bag with something for everyone.



■ Another utility from *Utils 1*. This is *Postcard*, and it means that you can import and chop Degas or Neochrome pictures into frames to create composite pictures. Handy if you don't happen to have Degas or Neochrome to hand.



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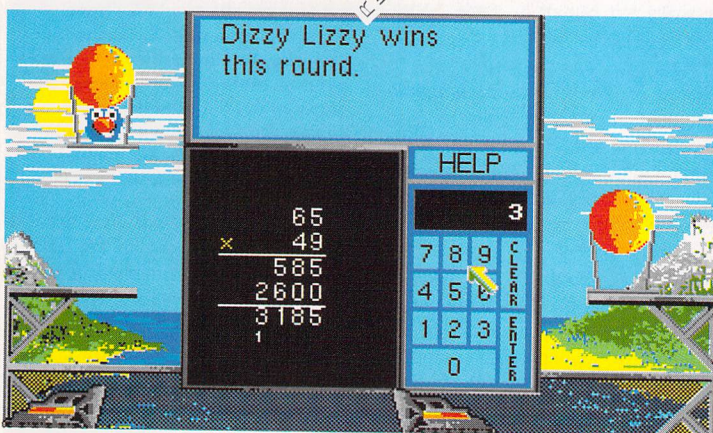
EARLY LEARNING MATHS 2 BUDGIE - DISK PRO 27

This is the second half of the previously commercial *Early Learning Maths* series. Big, bold and colourful graphics accompany the five sections which include a just-for-fun game. The difficulty level can be set from the very simple to the parent-confusing. It covers the basics of addition, subtraction, multiplication as well as division.

Each question is tackled in a simple step-through way,

and you have to enter the answers with the keyboard or mouse. If you should, by any chance, get any questions wrong the program goes through them in detail for you.

In an effort to keep your child's interest, two characters Dizzy and Meanie live on the disk and they battle out the result which obviously depends on your mathematical prowess. The whole thing is well-presented and rather slick - definitely one of the better educational efforts.



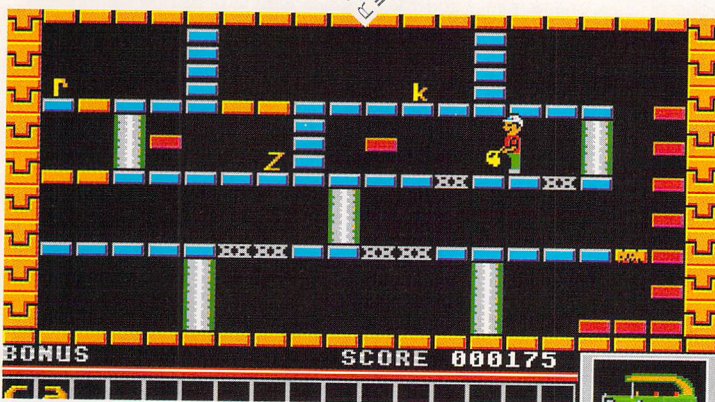
■ Dizzy floats off into a bright new future having pushed Meanie into oblivion by being a bigger clever-clogs in the maths department. Instills dangerous concepts on the duality of morality if you ask me. Still, who cares about morals when you've got a maths teaching program as excellent as this?

PLAY SPELL FLOPPYSHOP ST - DISK EDU 3254

What people really want to do is play games, right? Especially children who have had a hard day at school, so even the best educational software is likely to gather dust if it's no fun. *Play Spell* is a full-blown platform game - you jump around collecting letters in the right order to spell a simple word. A little picture of an object provides the clue.

The game itself is quite difficult at times, involving

some pretty dexterous manoeuvres, while the spelling bit features very basic words. This makes the learning process slow because you tend to find you're battling with your joystick long after you've managed to suss out the spelling. A password system to skip levels would help to access all 20 screens. *Play Spell* used to be commercial; you get closer to this if you register - there's a manual and you get data disks to add 40 more screens. Good for a bit, but it tends to turn into a straight game too quickly.



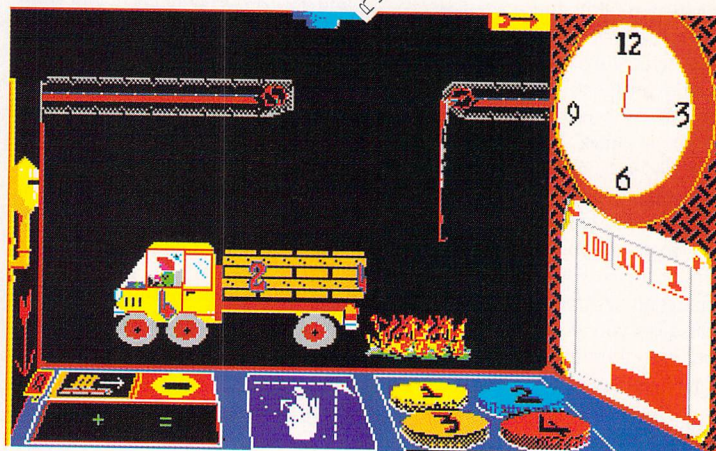
■ *Play Spell* gives the kids what they really want - a joystick mangling leap-about in the guise of a spelling exercise. To reach the next level just collect the letters in the right order to spell the name of the object in the bottom right window. That's the easy bit, some of the jumps are really difficult.

SCOO NOT SCHOOL GOODMANS PDL - DISK GD 1615

Charming and slightly weird prog-ette featuring a mis-shapen purple alien, *Scool Not School* is a collection of six sections which mix education and fun. There's a simple paint package, an address book in which you can store birthdays and addresses, a simple typing thing, spelling and maths games and an ST version of Fuzzy Felt. Remember that? Little

pieces of felt cut out in various shapes that you stick to a background to make interesting pictures, then lose on the carpet and up the vacuum cleaner.

Each section is colourful and fairly slick and the emphasis on being entertaining rather than actually educational. The spelling and maths sections are pitched towards the very young, while some of the other sections are likely to take a bit more savvy. A jolly good outing.



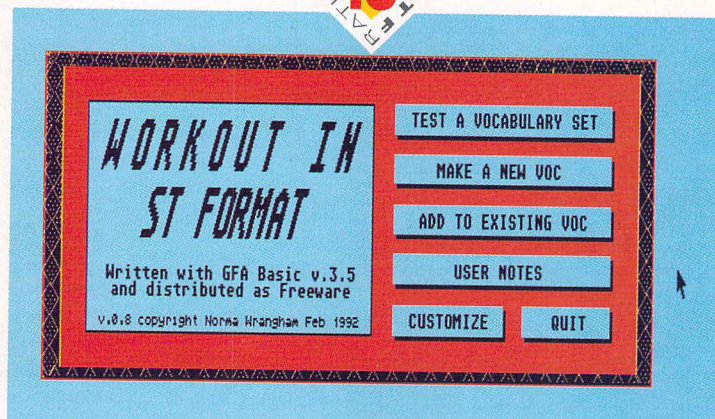
■ I dunno what these lorries are carrying but don't drop any of it - could be well dodgy. The sums section of *Scool Not School* is a very simple addition game - like the whole program it's well-presented and quirky.

WORKOUT REVISION AID GOODMANS PDL - DISK GD1651

Workout is a general purpose revision aid which is supplied with questions on several subjects including French translations of adventure game clues and stories, English grammar, *Dungeon Master* clues, Bible scriptures and a section of jokey questions and answers called playtime. The program is set up initially to check the French vocabulary problems - very handy indeed for 1992 and all that - but it is a

simple task to set up the program to use the other subjects provided.

The best feature of the *Workout Revision Aid* is the ability to design your own databases for revision, creating both questions and answers on the subjects you are - er, least proficient in. All this assumes you'd rather spend the time planning your revision than actually doing it - a bit like revision timetable planning. This disk is probably most interesting if you want to design your own puzzle or quiz, otherwise it is not really much use.



■ The questions we got with the *Workout Revision Aid* were all too simple for us here at Future Towers, so we devised our own *ST FORMAT Workout*. We're hoping that Jane Fonda is going to do the video for us.

GAMES

UNNKULIAN UNDERWORLD

LAPD - DISK G 202

Text-only adventure. Infocom fanatics and CAMRA types only need apply. Just kidding. The name *Unnkulian Underworld* might sound like one of those adventure games - lots of quasi-mystical old hermits, an aversion to vowels, a bizarre quest - and it is. But, brace yourself, it's got a sense of humour as well. The usual screenful of text is still an intimidating prospect, though the whole thing is done with an articulate and tongue-in-cheek readability usually so sadly lacking in other games of this type.

The parser is reasonably powerful, enabling you to have limited conversations with characters. The separation of commands with commas gives you an increased speed of progress through the more functional and boring bits.

It's essentially the story of an ex-slave - who just happens to be you - who toddles off to seek his fortune after his master sods off to the big

Branching Tunnel 8/10
northeast, south, and west. The southern passage is slightly wider than the others, and you seem to see a glimmer of light in that direction. A strange smell is in the air, brought on a faint breeze from the west...
read book
The book's rather big to waste too much time on now, but you open it to the middle and read:
...and thus, the natives can be mollified by a large and heavy hammer blow to the head.
Another interesting legend that the natives of the Beegas'hell Mountains are fond of telling tourists is that of the hallucinatory plants. Supposedly, some local plants, when crushed or powdered, will produce strange visions when eaten. Most report seeing a giant talking beaver in the vision who asks for snack foods. In fact, so the story goes, if the beaver is not fed in the vision it lashes out and kills the hapless trance-traveller, who dies in real life. Some go so far as to claim that the visions are real, and the giant beaver truly exists. At any rate, a common Unnkulian saying goes 'If thou wouldst journey in the Dream-World, make sure thou bringest something to stuff the beaver.'
We at Fodor's are inclined to reject the rumor as local folklore, as it is well known by the natives that tourists eat that sort of stuff up...
You stop reading.

Yes, reading a book in *Unnkulian Underworld* actually gives you some useful - not to mention rather suspect - information.

spell-laboratory in the sky. As the screenshot shows, it contains some highly weird problems and solutions. However, it also has plenty of the more conventional adventure-game problems, enabling the beginner to get stuck in without being laughed at too often.

The game was developed on the TADS text-adventure creator - which offers quite a decent vocabulary and word-crunching system - with only the old familiar "Thye look like ordinary stalactites to me" hassle. Sacks of humour and immensely playable. Looks terrible, feels terrific.



F-16 AND B-17 FLOPPYSHOP ST - DISK GAM 3277

A couple of plain 'n' simple blasting and bombing games shunted on to the same disk. Both written by one Martin Ribbink in trusty old STOS Basic, F-16 and B-17 are OK for half an hour's fiddling but they're hardly going to give MicroProse any sleepless nights.

B-17 is a variation on that decrepit old Blitz thing, where your plane flies left to right across the screen and, when it wraps around the screen, it drops down a level. The idea is to flatten the skyscrapers with your bombs and create enough room for your plane to land safely by the time it gets down to the bottom of the screen. Extra features include the ability to target fuel - enabling you to move your plane up - and bomb pods which mean you can temporarily lob more destructive bombs. In fact, you probably wrote a similar type of game in that week when you entertained a mild desire to learn how to program, before real-



F16 - shoot down the helicopters, bomb the tanks, blast the gun emplacements and then just - er, shoot down the helicopters, bomb the tanks and blast the gun emplacements again. And again.

ising that you weren't going to get anywhere near the assembly level.

F-16 is a bit more involved. This time you have control over your plane as you fly left to right across the wrap-around screen, bombing and shooting things. Occasionally, there's a 3D intermission, during which you get attacked by a plane - in 3D... and, er, that's it. Graphics are OK and it's playable. All in all though, it's a good effort with a touch more originality needed. See me.

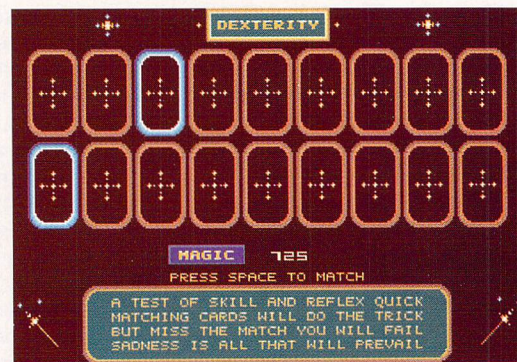


THE WIZ

PD ST - DISK GL 528

Another quizzical effort from Dunces' Cap Software - the creators of *Mindlock*. This time, more care has been taken over the graphics, the samples are better and there's even an attempt at a scenario - something normally left out of quiz games by default. You're an apprentice wizard who has to impress your masters by passing various tests to increase your magical power. The tests consist of trials of general knowledge, reflexes, vocabulary and memory. Do well and you're rewarded with more magic points. Do badly and you're unceremoniously booted out of the wizard's circle and demoted to the rank of Paul Daniels Of The Lower Order.

It's a curious little artefact which manages to appeal to both twenty-somethings and younger players. The biggest niggle is the reflex test which is very reminiscent of something that would have been given



A test of reflexes. "OK chaps, what you have to do is hit that Spacebar to match the moving card with the stationary one. Whoever gets closest to doing that wins a conker. No flicking elastic bands - and for goodness' sake, do pay attention at the back, Watkins!"

away free with the 48K Spectrum in 1983 - hitting a certain key at the precise moment probably isn't everybody's idea of lasting and exciting entertainment. This is definitely a progression from *Mindlock* and with only two minor faults to its name - the second being the rapid repetition of the questions, making it a little easy for the more determined funster. Good, clean fun.

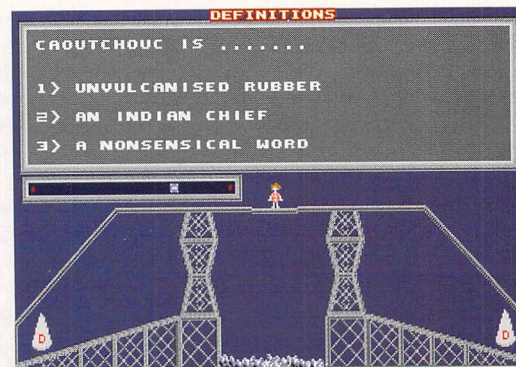


MINDLOCK GOODMAN'S PDL - DISK GD 1650

A cheery, uncomplicated quiz-'em-up with some great samples, *Mindlock* places you in charge of five chaps named Clarence whom you must save from various excruciating fates by dazzling everyone with your unbeatable knowledge of trivia, mathematics and the English language.

The first phase of the game is a straightforward general-knowledge quiz leading on to three rather remedial maths questions. Next it's *Call My Bluff* time - in which you attempt to figure out the meanings of words like grimalkin and ameliorate. Fortunately, though, Robert Robinson's nowhere to be seen. Finally, there's a strange, rather pointless little section where you have to press the Spacebar at the correct time to plug the gaps in a border.

Mindlock is not the kind of game to invite a few mates around to spend a night of debauchery in front of. It's



Mindlock - an inoffensive quiz game with a name that sounds like an episode of *The Prisoner* and a set of questions to make you feel like you've lost at *Mastermind*.

not very complex, the graphics are simplistic, it's repetitive, but - it's one of those games that you'll strangely find yourself playing one rather sad evening when you're bored with the latest commercial release, there's nothing on the telly and none of your mates are coming out. As with many other games of this nature, its major strength lies in its unpretentious simplicity.

A quaint and freshly attractive game which politely charms rather than wildly impresses. Ideal for quiz maniacs.



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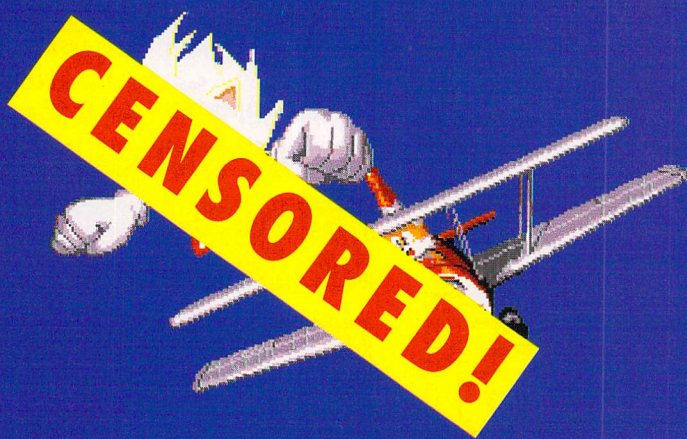
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Early Learning Maths 2, an excellent number for you if you have a little person in your life. It includes sugar coated maths lessons, squillions of questions and cute cartoony graphics. Get shown up as being innumerate by your six year old – adult embarrassment ahead.

Look

Unnkulian Adventure – a painless introduction to the strange world of text adventures. Lots of nonsense about talking to trolls and strange uses for magic things that glow in the dark – all rather silly, really. Expect to hear weird mutterings andappings on the port bow around midnight.

Ignore

Equatorial Atlas – this is all very clever and attractively done, but how many of us are really interested? Unless you have an incredible desire to learn about 43 major constellations and you're a budding astronomer, it's likely to be completely useless. Stars on the screen astern.

Avoid

Workout Revision Aid – let's face it, learning French vocabulary is likely to be a bit of a grind at the best of times and this doesn't help much. There are no flash graphics, exuberant sounds or even spoonfuls of brown sugar to help the medicine go down in this one.

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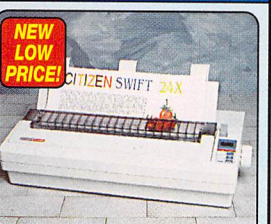
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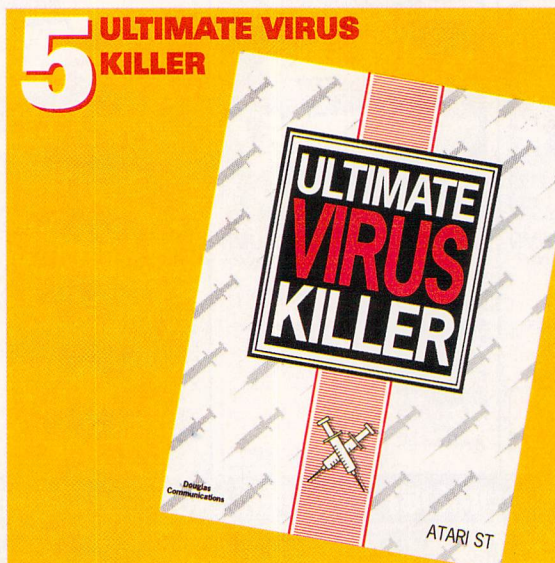
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GET STUCK IN!

Since you first took your ST into your bedroom, you have played games on it. But then you emerged, peered round the back and noticed some interesting-looking holes. Blimey, what are they for? Clive Parker checks his manual and reveals all



With all of your ST's ports and sockets there are hundreds of possible devices, dongles, cartridges and gizmos that you can add to make using it more

fun. We take a look at a few of the most common early additions that you should consider plugging into your setup and give you an idea where to start looking at specific hardware.

Floppy drives - the disk drive port

So, you don't think you need an external floppy drive? Well, for games you don't, but as soon as you start using any serious software – commercial or PD – then you are likely to find that just having the internal drive is a liability.

You know what a hassle it is swapping files between two floppy disks on a single drive setup – on an STFM you have to make four disk swaps for every file transferred and on an STE you have at least two disk swaps per file. On a two disk system all you have to do is drag files from Drive A to Drive B, and that's all there is to it. It's also much easier to use software since nearly every program you buy uses Drive A for

the program disk and Drive B for the data disk, where the files you create are saved. This is because the software may need to look at the program disk for extra data while the program is running to load dictionaries and graphics – if you have a data disk in the main drive, then the program cannot find the information and slows the whole process down. External drives cost from as little as £45, so get out your dosh and buy one – it could change your life.

■ Cumana CAS354 £69
WeServe ☎ 0705 325354
■ GI External Drive £59.99
Ladbroke Computing International ☎ 0772 203166
■ Zydec External Drive £49.95
First Choice ☎ 0532 319444

Hard Drives - the DMA (Direct Memory Access) port

A hard drive becomes an essential part of any ST setup as soon as you start moving into the realms of DTP, graphics and MIDI sequencing. All the software for these applications can be used without a hard drive, but owning one does make using your ST a lot easier.

For a start, everything is stored in one place on the drive – no more searching for Disk 2 or Disk 4 from a DTP program so you can load in a new font. Large music or DTP files that don't fit on a 720K floppy can be saved on to a

hard drive without a second thought. If you are into art and graphics packages, your vast collection of pictures can be stored in a series of folders, instead of on 25 floppy disks.

You can buy 30MByte drives from around £230 and 50MByte drives from just over £300 – they can be an expensive step up, but in the long run it's a price well worth paying.

■ Data-Pulse Plus 127MByte £429.99
Ladbroke Computing International ☎ 0772 203166
■ Power Series 900 40MByte £329
Power Computing ☎ 0234 843388
■ Progate 30MByte £229.99
First Choice ☎ 0532 319444

Loudspeakers - the phono ports (STE only)

Loudspeakers are a handy add-on for games, sound samplers and tracker playbacks. The quality of the monitor or TV output from an ST is not noted for being at the top of sound reproduction technology, but you can do something about it. The STE – and Mega STE – have handy phono sockets which you can connect to your stereo system or to a powered stereo amplifier and speaker unit. These units are unlikely to do much for inter-neighbourly relations – all your games and demos suddenly sound like something from your local arcade – and are just as loud. Amplified speaker sets cost around £20 to £40 depending on the quality and volume you want, but they can turn game-playing into a whole new soundsational experience.

As with virtually any ST product, it pays to shop around and try a few different suppliers before you finally decide to splash out. You can often find the same set of speakers on sale for wildly differing prices at any number of shops or mail order companies. Get yourself a pair of speakers and pump up the volume.

■ Maplins Active Speakers £49.95
Maplins ☎ 0702 554161
■ Zy-Fi Amplified Speakers £39.95
Evesham Micros ☎ 0386 765500

Modems - the serial port

Hey, everybody has heard of modems, but you have to be a propeller-head to work one, right? Not true at all, even Mark Higham (who?) managed to use one once. You usually just have to plug the thing in, switch it on, run the software, dial the number and you're off. With easy-to-use PD and Shareware comms programs like *Vanterm* and *Freeze Dried Terminal*, it is now dead simple to get to grips with comms on your ST.

A modem is a device which converts computer data into pulses which can be transmitted down a phone line and converted back to computer data at the other end. In this way documents, messages and programs can be sent back and forth. Downloading programs from bulletin boards means that you can get hold of some PD software before PD libraries do.

Faster modems are becoming cheaper all the time, and, with a 2400 baud modem costing as little as £60, the main expense is likely to be your telephone bill. If you do buy a modem perhaps you should consider investing in some BT shares. That way you should be able to get at least some of your money back!

■ Smart One 2400 modem and software £59.99
HCS ☎ 081 777 0751
■ Supra 2400 modem and comms software £79.99
First Choice ☎ 0532 319444

Monitors - the monitor port

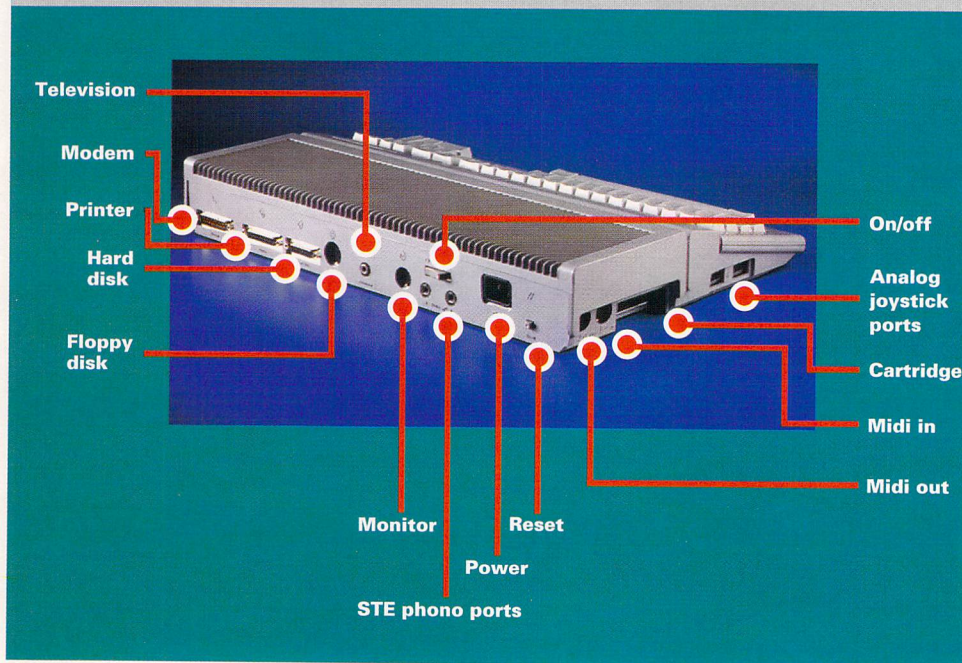
There's nothing wrong with using a TV if you just want to play games, but for anything more serious you really need a monitor. STs have two resolutions for serious work – medium and high. Unfortunately you need two different monitors to use both, so you have to make a decision on what you intend to use your ST for.

If, for example, you plan to do a lot of colour work using graphics packages to produce animations, drawings and raytraces, with some word processing thrown in, then you need a colour monitor. If, however, you intend to use professional MIDI programs, DTP, CAD (Computer Aided Design) or other serious high-end – and that means expensive – applications you need a high res mono monitor, since many of these programs cannot run on a colour setup.

Perversely, colour monitors are more expensive than high res mono monitors, with the Phillips and Atari colour models costing about £200, while the Atari mono monitor costs around £130. The choice is yours.

■ Atari 1435 Stereo Colour £209.99
First Choice ☎ 0532 319444
■ Atari SM144 High Res Mono £115
HCS ☎ 081 777 1751
■ Phillips 8833Mk 2 Stereo Colour £199
Silica Systems ☎ 081 309 1111

WHERE TO FIND THOSE ST PORTS



Music - the MIDI ports

The ST is the most popular computer in the world for producing music because of its built-in MIDI sockets. MIDI is a way for electronic musical devices to communicate with each other and with computers - it's a musical instrument specific language. MIDI enables STs to play instruments directly and to record the output of an instrument in digital form when played. Consequently a lot of software packages, such as sequencers, have been developed - sequencers are, in effect, digital tape recorders that can take the information produced by a keyboard, manipulate it and then replay it. You can even write your own music with some programs and then have your instrument play it back for you.

You don't have to spend hundreds of pounds to use sequencers on an ST - there are many PD and Shareware programs available from PD libraries and both Yamaha and Casio produce MIDI keyboards for around £100. In *ST FORMAT 39* we showed you how to create several different styles of music using your ST and a keyboard - turn to page 58 if you missed it.

■ **Concerto** £34.95

Cambridge Business Software ☎ 0763 262582

■ **Sequencer One** £39.99

First Choice ☎ 0532 319444

Printers - the printer port

A printer is usually the first thing you want to add to your ST - after all, it's easier to be able to show people what you've been working on if you've got it on paper rather than having to cart your ST and monitor around with you. You can also print out letters or READ.ME documents from PD disks. Most commercial serious software, PD utilities and programs have options to generate printouts, also known as hard copy. In fact, many programs are practically useless without a printer attached. For such basic output a relatively cheap 9-pin dot matrix printer (DMP) is normally of sufficient quality - you can pick a good one up for around £120.

24-pin printers can produce better quality printouts than 9-pins, but they tend to be slower and are not really suitable for large documents

or large print runs. If you only want to print small single documents and your budget starts at around £150, a 24-pin printer could be just what you are looking for.

More advanced programs such as desktop publishing (DTP) software can use all kinds of printers including 9-pin and 24-pin DMPs, but are designed to take advantage of inkjet and laser printers. This is because DTP programs use vast amounts of graphics data for high quality output and DMP printers are usually too slow without the image quality.

Laser printer prices start at around £650, produce wonderful results and at a reasonably high speed - usually between six and eight pages per minute (PPM). At this price lasers are likely to be out of your price range - and that's where the inkjet printer comes in. Inkjet printers

bring near laser quality to printed output but are slower, typically printing no more than three graphics pages per minute. Prices are much lower than for laser printers, starting at around the £230, making the inkjet an ideal compromise for home use. Whichever printer you choose, you are unlikely to regret getting one.

■ **Canon BJ-10ex Inkjet** £229.99

First Choice ☎ 0532 319444

■ **Citizen 120D+** £124.99

Softmachine ☎ 091 510 2660

■ **Hewlett Packard Deskjet 500** £359

Evesham Micros ☎ 0386 765500

■ **Panasonic 4420 Laser** £849

Gasteiner ☎ 081 365 1151

■ **Ricoh PCL5 Laser** £821.33

Silica Systems ☎ 081 309 1111

■ **Star LC-20** £136.99

First Choice ☎ 0532 319444

■ **Star LC24-20** £199.99

Softmachine ☎ 091 510 2660

Scanners - the cartridge port

A scanner is not a machine for taking pictures of the inside of your head, but a device which can transfer drawings from paper to the ST's screen. You would usually do this with a hand scanner - a small device rather like an overgrown mouse which is dragged across the picture to be copied. It has a series of LEDs at the business end which shine on to the paper. The amount of reflected light is then measured by a CCD (Charge Coupled Device) which can translate the

various light intensities into digital signals. These are then displayed on your ST's screen by the scanning software ready to be saved on disk as a picture file. You can load this into a graphics program and manipulate it.

Hand scanners cost about £100 and the main use for them is in conjunction with art and DTP packages. There is another kind of scanner called a flat-bed scanner which is more like a photocopier - it can scan complete A4 pages by placing them in the machine face down and

closing the lid. Flat-bed scanners are more expensive, starting at around £500 for a cheaper one. There are colour flatbed scanners available for the ST, but they are extremely expensive to buy. You can usually expect to pay around £1,000+ for hardware of this quality.

■ **Handy Scanner** £99.99

Evesham Micros ☎ 0386 765500

■ **Naksha Scanner** £99

WeServe ☎ 0705 325354

■ **Power Scanner** £99

Power Computing ☎ 0234 843388

Sound samplers - the cartridge port

The ST is nothing if not a versatile beast - although its original sound hardware was outmoded when the machine was designed in the mid '80s, it is a big player in the world of sound sampling. Sampling is a process where your ST takes a sound signal generated by a CD player, radio, tape deck or even a microphone, and converts it to digital information which the ST can manipulate and process.

To do this you have to plug an extra piece of hardware - a sound sampler - into the car-

tridge port. This cartridge contains the ADCs (Analog to Digital Converters) which convert the sound signals and in some cases it contains DACs (Digital to Analog Converters), which can play back sounds recorded at frequencies too high for the ST's internal hardware to cope with.

Sound samples can be added to games to provide realistic sound effects, used on the Desktop to replace system sounds (see *Sysbeep* on Cover Disk 39) or used to create entire tunes in a soundtracker program. *Sequencer One* and *Quartet* are two well-known commercial pro-

grams which can use sound samples to create tunes, and both can be linked to a MIDI instrument to enable samples to be played from the keyboard. Professional samplers, such as the Akai S1000, cost thousands of pounds, so when you consider you can get an ST sampler for as little as £30, you know it makes sense.

■ **Replay 8** £63.95

Evesham Micros ☎ 0386 765500

■ **Replay 16** £129.95

Microdeal ☎ 0762 68020

■ **Stereo Master** £29.95

First Choice ☎ 0532 319444



■ "I said I'd be back. Here I am." "Yeah - me too." "Shut up, James. You're only famous because of your brother." "That's a lie. I am talented... I can do Shakespeare. To be or not to be. See?"

■ The Addams Family - it's finger-clicking good. Sorry, this is a terrible caption. Will it do?



■ Ah - remember that Ray Parker Jr classic number one of 1984? "Who ya gonna call?" Yeah! "Ghostbusters!!" Terrible, wasn't it?



■ "Arnie, are you nervous?" "Definitely. I'm always typecast as a beefcake who can only pull a trigger... and, frankly, I'm depressed."

SPRITES CAMERA ACTION

Is the ST movie tie-in just a part of the book, the t-shirt, the soundtrack, or is it a standalone work which, if dragged out from under the protection of the license, would stand up to scrutiny? Andy Lowe eyes up the clapperboard and covets the director's chair. He's funny like that

Films, movies, flicks, pictures - call 'em what you will - they're a part of our culture. They reflect it - hell, they sometimes dictate it. *Wayne's World* and the *Bill and Ted* films inspired a whole generation to gleefully embrace the habit of dude-speak. *Basic Instinct* tried to make sex fashionable and dangerous. And failed. The Arnie films conditioned us to the marvel of the body-count. These things are powerful and although, it's nonsense to suggest that violent films inspire violent actions, we'd be pretty dumb to deny that movies have a serious influence on our attitudes.

Movies are mass media. So are video games. It would therefore seem an obvious move to combine the two in an uneasy but extremely lucrative partnership. The thing is - movie tie-ins are, more often than not, crap. It's easy to see why. Without the spontaneous sparks of original genius that inspire the finest games, there must be an enormous temptation to let things cruise along, to churn out some-



■ "OK - maybe I'm not right for this role. But I was good in Frankie and Johnny, wasn't I?" "Er, no."

OCEAN SIZE

Ocean - one of the longest-standing software houses in the country. Also widely recognised as the kings of the film tie-in... But how does it all happen? How do they get 'em and do 'em? Mick West, currently coding *Lethal Weapon 3* in-house for Ocean, enlightened us...

stf: How do you approach a film license?

MW: The movie may not be finished yet, so we need to get hold of the actual script, which we read and, hopefully, draw inspiration from. Then we're supplied with source material from the

film company - photos, work-in-progress... We then need to work out exactly which parts of the film are to be translated into the structure of the game. Next, we get to work on designing the thing.

stf: What kind of problems do you encounter?

MW: Trying to stay true to the spirit of the film is difficult. We need a connection between the artistic presentation of the film, and, at the same time, provide decent gameplay. Sometimes, you have to make compromises. It's a little incongruous to imagine tough-guys like Mel Gibson reduced to a cute sprite bouncing on baddie's heads.

stf: How do film licenses come about? Who approaches who and on what terms?

MW: Ocean have a good relationship with a number of film companies and the companies may tell them what films are on the way and are up for conversion. It's all a result of past experiences. Film companies know where they are with Ocean. With the larger, more general licenses, there tends to be a bidding process with the other software companies and the winner is usually the company with the better reputation.

stf: How do you think a license helps the marketing process? Do you really believe that a film tie-

in helps to attract people to the game?

MW: Yeah. They know what sort of thing to expect. It can also make it easier to get into the game. Besides, a lot of kids don't get to see the 18 rated films, like the original *Lethal Weapon*.

The trend for licenses is part of the general convergence of the entertainment industry. Things can and probably will work the other way around very soon. There are already rumours of films based on computer games - I've heard about *Double Dragon* and also *Mario World* starring, believe it or not, Bob Hoskins or Danny De Vito. So the whole thing may soon become a lot more merged.



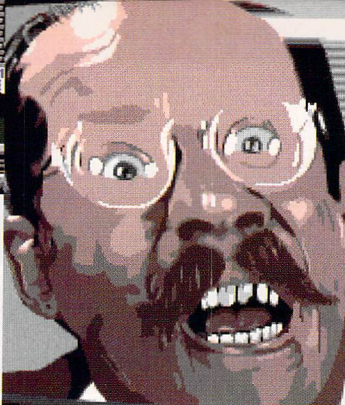
■ A long, long, long, long time ago in a galaxy far far far far far away... Oh bugger, I've forgotten the rest of the quotation.



■ "I'm Frank Robocop. I don't mean I'm a sincere model of Robocop - it's my name. Ha ha. See, I've got a sense of humour, too. Now, put the gun down."



■ ED 209 is a lethal piece of robotic weaponry and is not famous for his conversational affability or amusing anecdotes. Neither is Ed Ricketts.



MOVIES... AND ST GAMES?

■ Apparently, he'd buy that for a dollar. What a nice man.

MOVIES

Here's a list of every movie tie-in game ever released on the ST and not mentioned somewhere in this feature. We may have missed one or two - but then we're human, aren't we? I think...

Back To The Future 2 - Mirrorsoft/Imageworks
Back To The Future 3 - Imageworks
Bart Simpson vs The Space Mutants - Ocean
Batman - Ocean
Darkman - Ocean
Flight Of The Intruder - Digital Integration
Ghostbusters 2 - Activision
Gremlins 2 - Elite
Hook - Ocean
Indiana Jones - The Graphic Adventure - US Gold
Monty Python (well, they made films, didn't they?) - Virgin
Plan 9 From Outer Space - Gremlin
Red Heat - Ocean
Spiderman (ahem!) - Empire
Terminator 2 - Ocean
The Addams Family - Ocean
The Blues Brothers - Titus
The James Bond Collection - Domark
The Running Man - Grandslam
The Star Wars Trilogy - Domark
The Untouchables - Ocean
Total Recall - Ocean

And, coming to an ST near you, soon... Cool World and Lethal Weapon 3, both by Ocean - what a surprise.

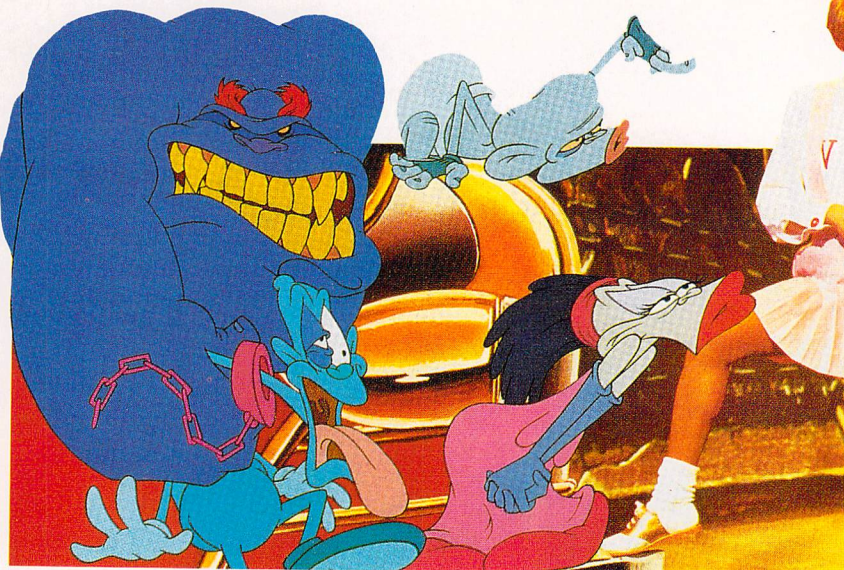
We'd be dumb to deny that movies have a serious influence on our attitudes

thing rather ordinary which is predetermined to hitch a ride on the hype of the movie. We rest our case with the fact that only two movie tie-ins have ever made it to FOR-MAT Gold status - RoboCop 3 and Batman - both were published by Ocean.

The RoboCop games have a strange record, anyway. In the film world, sequels are awaited with about as much excitement as freezing Wednesday nights in January. The two RoboCop films effortlessly lived down to this - with RoboCop 2 getting nowhere near the extraordinary vision and cult status of the original.

But the three ST games actually got better - respectively achieving 56%, 84% and 94%. It's as though someone actually learned from the mistakes and, anyway, RoboCop 3 should be anyone's idea of an ideal movie tie-in. It looks slick and cinematic and actually seems to be inspired by the film. All this instead of the more usual desperate attempt to come up with a barely average platform game which hardly seems relevant to the original story and characters. We must live in hope that any future developers of movie tie-ins are taking note. **stf**

■ "Phooar! Look, boys - it's Kim Basinger." "Aw, come on. Everyone knows that cartoon characters never have any..." "Please. This is a family show - delectable as Ms Basinger is..."



CUT!

Five of those movie tie-ins that really should have ended up on the cutting-room floor

BEVERLY HILLS COP

TYNESOFT

STF Rating - 49% in Issue 8

No. Not good. This one falls into the trap of trying to cram too many different types of action into one game - thus spreading the quality of the whole thing far too thinly.

MOONWALKER

US GOLD

STF Rating - 84% in Issue 5

84%? No, no, no. Don't agree. Sorry. An intensely boring and heavily non-addictive bout of walking around, picking up pieces of rabbit suits and wondering "Why?" a lot. Don't be wooed by those pretty animated intro sequences. They're just a

heavy veil over a shy and uninteresting game. A curious example of a game that is just as bad as the original movie.

NIGHTBREED

OCEAN

STF Rating - 58% in Issue 16

Hmmm. A bit different this one. It's a game that seems to be trying to take the place of the movie. Jolly cute graphics, neat animation and all that... But it's not an "interactive movie," and it falls into that old and glaringly obvious trap of trying to shove in a few rather gratuitous "action sequences"... which aren't. Not even remotely. Watch the film. It's not brilliant, but it's better than this.

TEENAGE MUTANT HERO TURTLES

MIRRORSOFT/IMAGEWORKS

STF Rating - 38% in Issue 19

Once, the turtles were bad, bold

baddie-bashers. Imagine everyone's excitement when we found out about the ST game based on their antics... Er - oh, it's a bit crap, isn't it? A distinctly drab and utterly plain platform game.

■ Michelangelo - or is it Donatello? - wanders along an astonishingly uninspiring backdrop in one of the ultimate film tie-in turkeys.



LIFE, THE UNIVERSE AND EVERYTHING

You know the bit of bubble gum you find at the end of an ice cream tub? This is its tasty cousin. Enjoy!

FORMULA ONE GRAND PRIX REVISITED

At last, STF has spawned its own child prodigy in the form of 14 year old James Moran. Unlike us poor unfortunates at ST FORMAT, James actually has to pay

for his ST games and so is uniquely qualified to comment on what's hot and what's not. This month he examines Microprose's famous racing sim

You are a psychopath, a nasty, murdering psychopath – even your children don't like to be seen out with you. Among your latest casualties are a few rather well-known racing drivers. A master of disguise, you assume their identities and race around the world in a souped up go-kart, becoming a grand prix legend in your own lunchtime.

In the real world of Formula One racing you can leisurely pounce around the cream of the

world's race-tracks and smile drily at the small amounts of spectators, your tyres spitting grit as you go. But, with *Formula One Grand Prix*, Microprose make sure you can do all that and more.

You can choose where and how you want to race, what to race with and whether it's worth racing at all – why not just learn to play the clarinet instead?

One of the game's neat touches is its adjustable difficulty level. This ranges from Rookie to Ace and there's loads of help for beginners – auto brake, auto gear, auto backscratcher – which is gradually cancelled out as you get better. Even so, the professional is well catered for – you can choose the correct wind downforce and the type of tyres, for example.

The sound is bearable, at first, and gives a jolly realistic Formula One engine noise, but after seven hours of tearing around the track it can get an incy little bit irritating. Several pairs of earplugs are recommended.

On the whole, the game is good. It is harder to get into than *Test Drive* or *Cisco Heat*, but a darn

sight more fun when you've mastered it. The graphics are very good with excellent backgrounds and the manual is first class. The sound is fairly crap, though.

On the minus side, the two-player mode is flippin' awful, while the one-player mode is frustrating. If you wreck your car – tactically, of course – you have to watch the other drivers whizz round until the end of the race, by which time you feel so humiliated you're tempted to grab the game and feed it to your gerbils. The only way to abandon play during a race is to hit the reset button and start again.

Another pet hate is the painful amount of disk accessing to be done – there are four wretched disks to load – some of them twice – and the whole tedious rigmarole of setting up takes about 20 long minutes.

For all its faults, *Formula One Grand Prix* is a reasonably good race sim. It's easily as good as *Lotus Turbo Challenge 2*, or any of the other 7,000 clones around and should help to while away those long winter evenings. If your name is Nigel M and you've got a nifty tosh, this game ought to be implanted into your brain.

STF Rating: 75%



■ **Formula One motor racing is like going round a multi-story car park. There's always some smug git in front hogging all the room.**

TAVAM2GLRGILTWOP Competition winners

There were sackloads of entries for our Megatraveller 2 comp which appeared in STF 37. The answers were (a) *This time it's war* (b) *Megatraveller 2 is the sequel to Megatraveller and* (c) *Glad It's All Over*. Unfortunately, Empire have discovered a bug in Megatraveller 2 since then and have awarded alternative prizes to winners who requested the game.

Megatraveller winners

Howard Angel, Harrogate
Steve Baxter, Skegness
Andrew Borthwick, Kilmarnock
Michael Cadshead, Manchester
S Capehorn, Luton
Chris Coleman, King's Lynn
R Collins, London
Leighton Cooper, Wareham
Scott Fisher, Kingsbridge
Alan Matthews, Tyldesley
M T McGuirk, Southampton
Matthew Mellor, Sandbach

Laurence Passmore, Reading

A Piper, Cardiff
Ilkka Poutanen, Valkeakoski, Finland
L Rigden, Faversham
G Salcombe, Brierley Hill
A Shorthand, Malvern
Dominic Smith, Grimsby
B J Tew, Northampton

Aliens 2 video winners

J Barrett, Glasgow
P Berg, Edinburgh

Chris Braid, Blandford Forum

Martin Cubitt, Rayleigh
P Embley, Weston Super Mare
Emyr Gwyn, Anglesey
D N Hazelden, BFPO 19
D Hunter, Sunderland
Keven Joyce, Sheffield
R Layfield, Northallerton
S Philipson, Consett
Mark Povey, Bilston
P Spurr, Winterton
P R Thackray, Bradford
G Wright, Kettering

ADVERTISERS INDEX

A.C.S.	82	Markotec	94
Analogic Computers	36	MT Software	120
Arnor	30	Merlin	IBC
BCS	93	New Age Public Domain	118
CIS	110	New Data Systems Ltd	94
Caledonia	120	Ocean	28,75
Cambridge	93	PD4U	123
Cheetah	86	PP Video	94
Computer Mates	70	Pacific Software	94
Datagem Ltd	96	Penge TV & Video	115
Domark	65	Phoenix Services	123
Europress	57	Power Computing Ltd	IFC,3
Eagle Software	78	Premier	82
Evesham	35	Rubysoft	85
First Choice	104,105	Silica Systems Ltd (SDL)	41,69,91,127,131
Freaks	120	Soft Machine	52
Gasteiner	76,77	Solent Software	123
Goodman PDL	118	ST Direct	137
H.C.S.	22,23	The ST Club	118
Homebased Business	115	Tanglewood	110
Intermediates/Spec Reserve	6,7	Tottenham Court Road	110
Kosmos	110	TSC	123
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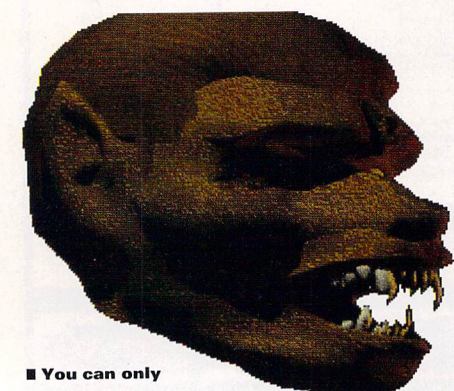
■ Just one of the admirable professions you can follow in the wonderful medieval town in *Legends of Valour*...



■ ...Is that of Were-wolf. These transitional pictures show just such a transformation...



■ These faces are fully rendered 24-bit images. However...



■ You can only see them in this sort of resolution in the Falcon version. No other computer can cope with the colour demands.

Legends of Valour

Humour, it must be said, is sadly lacking in most ST games. Alright, so *Monkey Island's* funny and *Lure of the Temptress* is a bit chucklesome, but, by and large, witty ST games are about as common as intricate plots or surprise endings in a Jeffrey Archer novel

It's worth advising prospective owners of *Legends of Valour*, then, that if they can't think in a distinctly Pythonesque way they're likely to end up bashing their head repeatedly against the monitor screen in a distinctly Pythonesque way. In fact, if you came across a tag line for this game in America it'd probably be something like, "Packed full of weird limey humour." Or something else like that.

Legends of Valour is an all-British role playing game set in a medieval town sometime during the dark ages. You're a MUMPIE (medieval upwardly mobile peasant) and you've got to rise to the top of society. How you get there and what kind of pursuits you engage in en route are largely up to you. You can walk on the wild side or you can be a charitable citizen and get to the top by hard graft.

Legends of Valour will be coming out on the ST around the end of the year and on the Falcon sometime during 1993. It's a big game from a big company and, from what we've seen so far, it looks brilliant and plays even better. Oh yes – and both Andy Lowe and Hutch are characters within the actual game. Keep your eyes peeled for the exclusive demo on our Christmas Cover Disk. Pillage on. **stf**

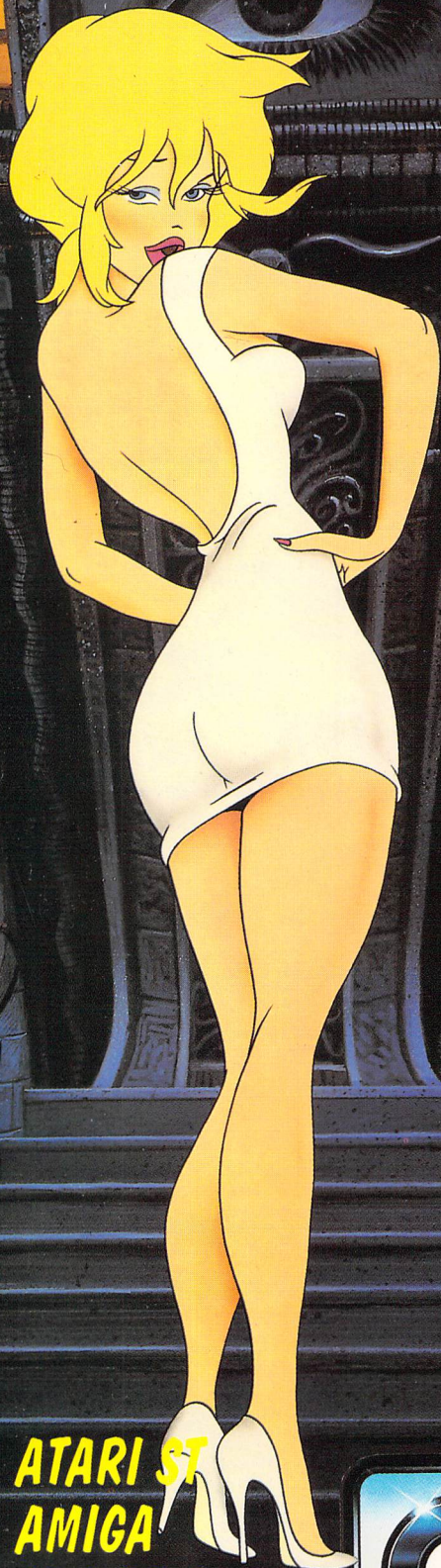


■ One of the best aspects of the game is the way in which you can insult passers-by to get what you want from them. You can then interrupt when they're replying to your questions – so they ask why you bothered speaking to them in the first place.

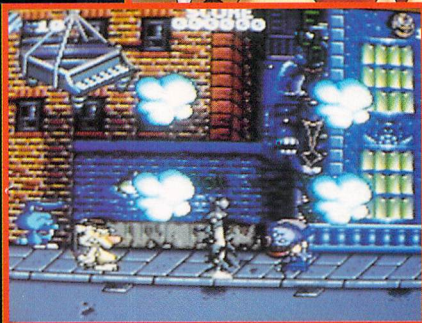
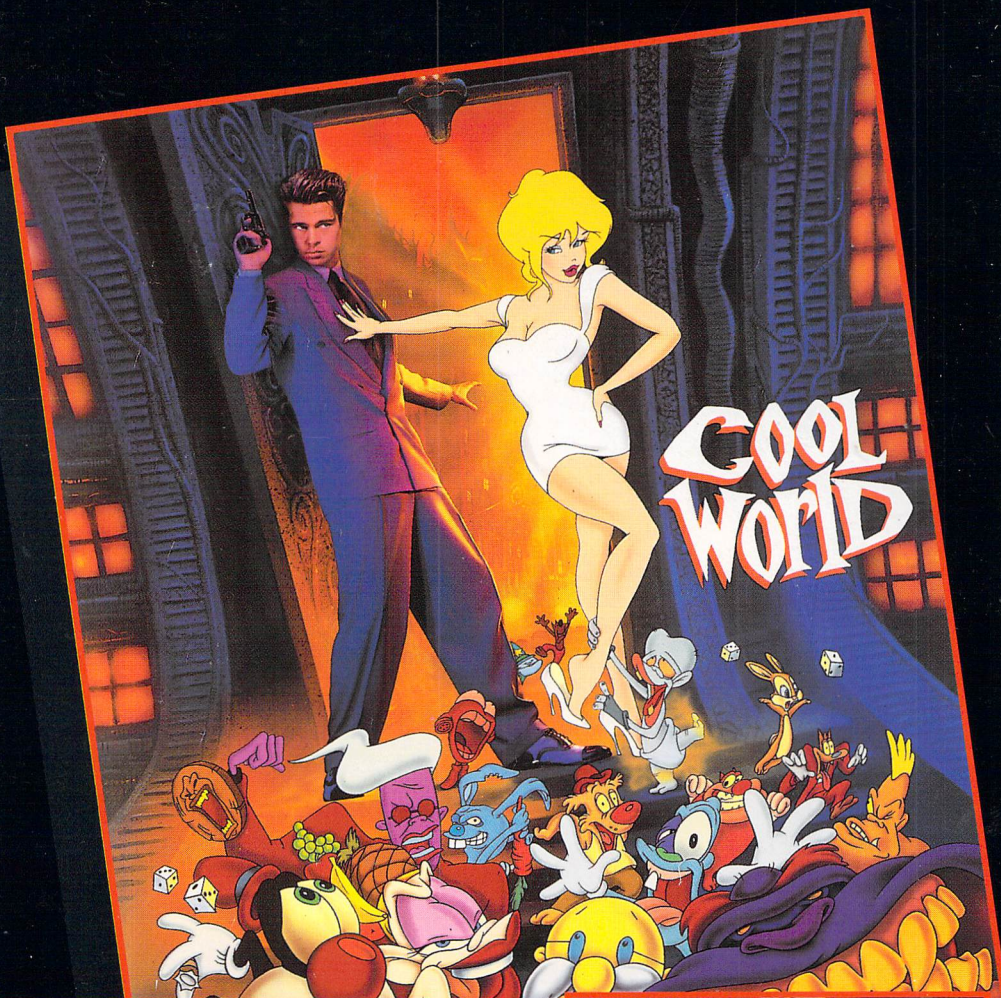


■ Oh dear, this chap looks a bit fat, doesn't he? I bet he drinks Carling Black Label. Rather attractive necklace, though - wonder where he got it!

HOLLI WOULD
IF SHE
COULD
...and she will



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